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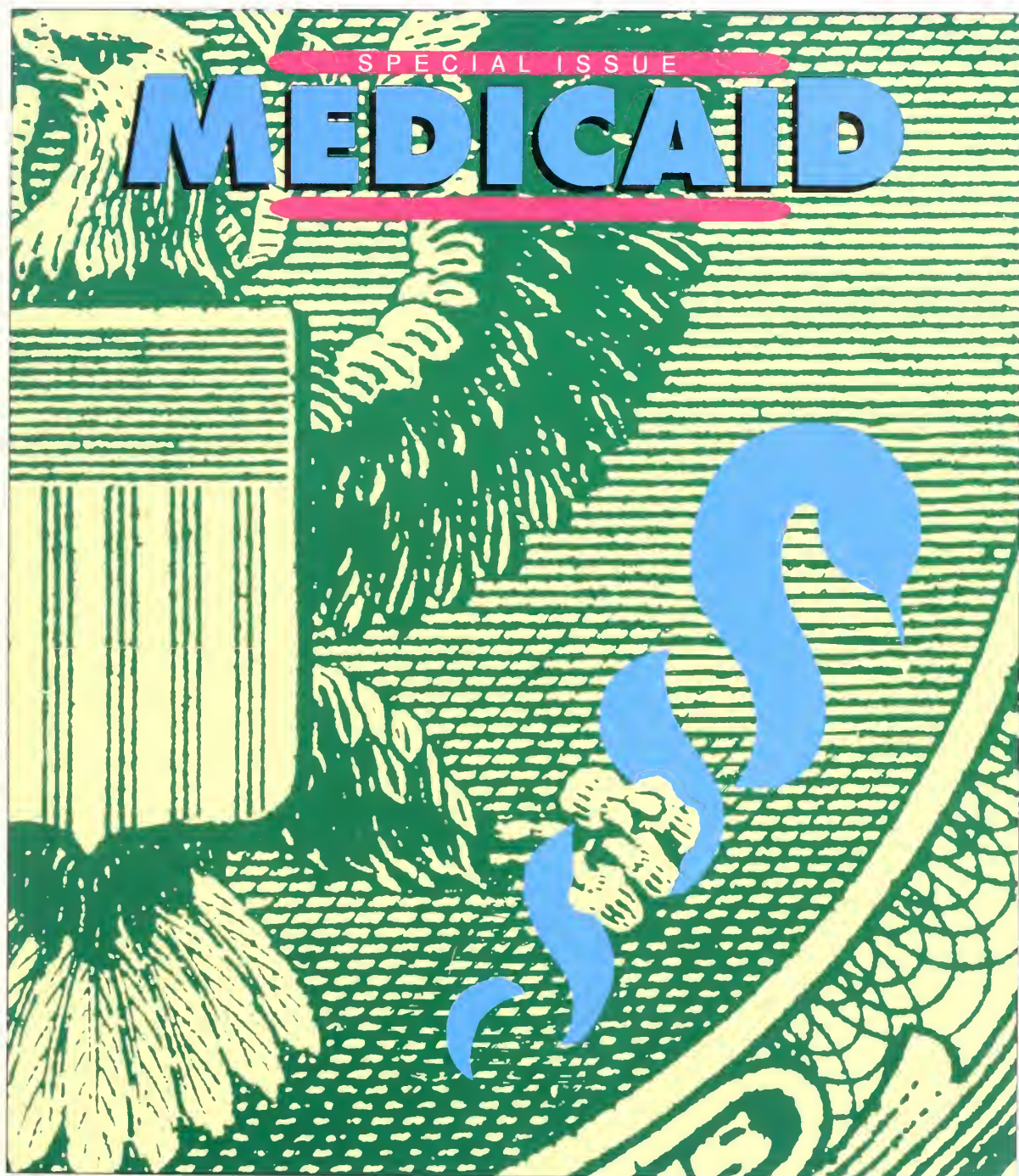


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OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

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VOLUME XXXII

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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 1

January 1991

Dear Doctor:

This issue of the Journal features four articles on the Medicaid program in Mississippi. *Physician Participation in the Mississippi Medicaid Program: 1989-90* contains the results of a Mississippi physician survey conducted in 1989 to determine the degree of current physician participation in the Medicaid program. This article also includes the assessed attitudes of these physicians about the program. Forty-seven percent of the physicians surveyed responded to the questionnaire. *Legislative Modifications to the Mississippi Medicaid Program in 1990*, Parts I and II summarize the changes in the Mississippi Medicaid program resulting from federal and state legislation effective in 1990. These two articles look at financing, eligibility, services, reimbursement and other changes. The final article, *A Profile of the Medically Uninsured in Mississippi* addresses the 467,000 uninsured persons in Mississippi.

The American Academy of Pediatrics has released the following information on teens who smoke:

- More than 3,000 teenagers become regular smokers each day in the United States.
- Over one million adolescents start smoking annually.
- They purchase about one billion packs of cigarettes per year to support their addiction.
- Approximately six million U.S. teenagers smoke.
- There are also 100,000 children between the ages of 10 and 13 who smoke.

MSMA is accepting nominations for the 1991 Community Service Award. The prestigious Community Service Award, consisting of a plaque and \$500 contribution to the recipient's favorite civic organization, is presented annually to the MSMA member who demonstrates outstanding community and civic participation. Nominees are named by their component medical society and should be submitted by March 1.



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# Dateline

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 1

## **President George Bush Proclaims March 30th "National Doctors' Day"**

**Birmingham, AL** - President George Bush has signed a proclamation establishing March 30th as "National Doctors' Day". This culminates the efforts of legislators who passed both Senate and House Resolutions to establish a day in recognition of the invaluable contributions physicians have made to the Nation and continue to make daily.

Approximately 586,000 physicians in thirty-seven specialties practice medicine in the United States today, each playing an important role in meeting America's medical needs. From the rural doctor to the most highly trained specialist, physicians touch the lives of almost every person in the community.

## **Breast Cancer Poses Threat To 1 in 10 Women**

**Jackson, MS** - One in ten Mississippi women will develop breast cancer at some point in her life. According to the 1990 edition of the American Cancer Society's *Cancer Facts and Figures*, approximately 1,300 Mississippi women will be diagnosed with breast cancer in this year alone. Nationwide there will be 150,900 new cases. Despite the high number of reported breast cancers, new advances in treatment have stabilized the mortality rate for this form of cancer. Today, with early detection and treatment, the survival rate for localized breast cancer can reach 90%, and for breast cancer in situ (not invasive), the survival rate approaches 100%. Dr. John C. Clay, President of the Mississippi Division Board of Directors says, "Early detection is the best weapon against cancer. We urge women to follow the steps to detect breast cancer at its earliest stages, when the opportunity for successful treatment is greatest."

## **Health Official Warns of Budget Cut Ills**

**Jackson, MS** - The state's top health officer warned legislators that budget cuts in his agency would mean more sick babies and venereal diseases. Dr. Alton Cobb predicted that infant mortality, which dropped in 1989, would increase. He also said that syphilis and gonorrhea rates, already some of the highest in the nation, would continue climbing. Vaccines to keep small children healthy would be harder to obtain and about 200 health workers would be laid off. "We've got bad rates in sexually transmitted diseases and in other areas now. They can only get worse," said Cobb, who directs the State Department of Health. "We are talking about basic public health responsibilities. On diseases like syphilis, you can't just come back later on and patch things up."



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## Physician Participation in the Mississippi Medicaid Program: 1989-90

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JACKSON, MISSISSIPPI

At the inception of the federal Medicaid program in 1965, the intent of the program designers was clear: to allow the poor to buy into the "mainstream" of medical care<sup>1,2</sup> which at that time was composed largely of private sector, fee-for-service physicians. However, many privately-practicing office-based physicians have chosen to not participate in the Medicaid program, so that Medicaid recipients have sought health care instead from physicians in hospital emergency rooms; from managed care operations, such as health maintenance organizations; from nurse practitioners; and from personnel in state and local health departments and in federally supported community health clinics.

Many studies<sup>3-10</sup> of physicians' attitudes and behavior have suggested several reasons for their reluctance to accept Medicaid patients into their regular practices:

1. Low reimbursement levels, which often make it impossible to break even on overhead expenses;
2. Excessively long and unpredictable waiting time from the submission of claims until payment is received;
3. Complex rules and regulations which lead to er-

rors, resulting in payment delays;

4. The perception that Medicaid patients are, as a group, more difficult to manage, either because they are unable to adhere to treatment recommendations, or because they over- or underutilize health care facilities;
5. A perception that Medicaid patients are more likely to file claims and/or lawsuits against physicians than are private patients;
6. A perception that if their medical practices are made up of excessive numbers of Medicaid patients, private-pay patients will seek health care services elsewhere.

To assess physicians' current attitudes about participation in the Mississippi Medicaid program, the Mississippi State Medical Association (the Association), in conjunction with the Division of Medicaid (the Division) and the University of Southern Mississippi (USM), carried out a statewide survey in 1989 and 1990 of currently licensed physicians included in the files of the Association, whether members of the Association or not. This paper summarizes the results of that survey.



## METHODOLOGY

In December 1989 the survey instrument, developed by the Association and the Division, was sent to all physicians (3051) listed in the Association files as of December 1989. This mailing included 88% of the 3484 physicians licensed by the Board of Medical Licensure to practice in Mississippi. The difference, 433, is attributable largely to house officers in training, military physicians, and physicians listing their primary practice locations as being outside the state. The President of the Association sent a cover letter encouraging participation in the survey, and notice of the survey was published in the monthly news bulletin regularly received by physicians. Four weeks after the first, a second mailing was sent to physicians who had not responded. In April 1990 the Association Auxiliary made telephone contacts with non-respondent physicians or their office personnel.

The Center for Community Health, organized as a division within the College of Health and Human Sciences, USM, collected and analyzed all responses. Analysis was carried out on a Honeywell CP-6 main-frame computer, using a standard statistical package, SPSS-X Release 2.1.

## RESULTS

### Response rate and validation

Forty-seven percent (1371) of the 3051 physicians who were sent questionnaires returned them.\* Respondents were compared by age, practice location, and specialty to all physicians in the MSMA file current in September 1990, using the Z statistic. The two MSMA file lists utilized (December 1989 and September 1990) were not identical due to continuous revision. There was no difference in responses by either age (birth year greater than or equal to 1950), or by urban/rural practice location. The primary care specialties of family/general practice, internal medicine, and pediatrics showed no differences at statistically significant levels. Obstetrician-gynecologist and surgical specialists responded to a greater degree than expected, but medical specialists and hospital-based specialists responded to the question-

naire to a lesser degree. We did not consider these differences to be of such magnitude as to bias the conclusions drawn regarding participation in the Mississippi Medicaid program by practice specialty.

### Specialty practice

Over 75% of 1345 responses were affirmative to the question "Are you board certified in the specialty that you now practice?" Of the 1320 physicians identifying their practice specialty, family medicine physicians comprised by far the largest specialty group who responded to the survey: 359, or 27.2% of the total. Obstetrician/gynecologists, internists, general surgeons, and pediatricians followed with 129 (9.8%); 128 (9.7%); 105 (8.0%); and 88 (6.7%), respectively.

### Type of practice

Over 78% (1057) of the 1343 physicians answering the question indicated that their practices were office-based. Forty-two percent (579) claimed a group practice setting, while 40% (560) indicated that they were in solo practice. Five percent (65) stated that they worked for a state agency.

### Urban v. rural practice location of respondents

Sixty-one percent of respondents indicated that their practice location was in an urban county; the remaining 39% were located in a rural county. The distribution of responding physicians exactly reflected the overall state distribution of physicians when compared to MSMA files. The response to the survey by urban-rural practice location is displayed in the last column of Table 1. "Urban" is defined in the footnote to the table.

TABLE 1 DEGREE OF PHYSICIAN PARTICIPATION (PERCENT ROW TOTAL) IN MEDICAID, BY URBAN <sup>1</sup> OR RURAL LOCATION.				
Location	Degree of acceptance of Medicaid patients <sup>2</sup>			
	All	Some	None	Total
Urban	355(45.4)	357(45.7)	70(9.0)	782(100)
Rural	324(65.6)	149(30.2)	21(4.3)	494(100)

\* Not all 1371 physicians responded to each survey question. "Respondents" as used in the text generally refers to the total number responding to a specific question, and is always less than 1371. When cross tabulations were performed, the "total responding" was further reduced.

<sup>1</sup>"Urban" means counties in which more than 50% of the population lives in cities or urban centers of more than 2500 people (Bureau of the Census). Included are Adams, Coahoma, Grenada, Forrest, Harrison, Hinds, Jackson, Lauderdale, LeFlore, Lowndes, and Rankin. All other counties are considered rural.

<sup>2</sup>See text footnote this page.



**TABLE 2**  
**RESPONSES TO SURVEY AND LEVEL OF PARTICIPATION, BY SPECIALTY.<sup>1</sup>**

<b>SPECIALTIES</b>	<i>Degree of acceptance of Medicaid patients</i>							
	<i>All</i>		<i>Some</i>		<i>None</i>		<i>Total</i>	
	<i>N</i>	<i>%<sup>2</sup></i>	<i>N</i>	<i>%<sup>2</sup></i>	<i>N</i>	<i>%<sup>2</sup></i>	<i>N</i>	<i>%<sup>3</sup></i>
<b>PRIMARY CARE</b>								
Family/general practice	213	61	107	31	27	8	347	27
Internal medicine	33	28	75	63	12	10	120	9
Pediatrics	53	62	30	35	3	4	86	7
Obstetrics/gynecology	39	30	74	57	16	12	129	10
<b>MEDICAL</b>								
Cardiology	14	54	12	46	-	-	26	2
Neurology	14	40	16	46	5	14	35	3
Dermatology	5	33	9	60	1	7	15	1
<b>SURGICAL</b>								
General surgery	71	70	30	29	1	1	102	8
Urology	26	77	8	24	-	-	34	3
Ophthalmology	30	44	37	56	2	3	69	5
Orthopedics	17	36	26	55	4	9	47	4
Otolaryngology	11	38	17	59	1	3	29	2
<b>HOSPITAL-BASED</b>								
Anesthesiology	35	69	12	24	4	8	51	4
Pathology	18	95	-	-	1	5	19	2
Radiology	39	98	1	3	-	-	40	3
Emergency Medicine	26	87	1	3	3	10	30	2
<b>PSYCHIATRY</b>	8	31	13	50	5	19	26	2
<b>OTHER</b>	28	37	41	53	8	10	77	6
<b>TOTAL RESPONSES</b>	680	53	509	40	93	7	1282	100

<sup>1</sup>Fifty-one respondents did not specify a practice specialty; 42 did not specify their level of participation in the Medicaid program.

<sup>2</sup>Percent of row totals.

## Participation in Medicaid

**a. General** - In response to the question "Do you now accept all Medicaid patients who contact you, only some, or none?" 53% of respondents (706) said that they accepted all, 40% (526) some, and 7% (97) none. Thus, the overwhelming majority (93%) of respondents accepted at least some Medicaid patients. Thirty-six percent (434) of 1214 responders indicated that they accept them only upon referral; 9.5% (115) accept them only in emergency situations; and another 9% (113) accept them only for acute care.

**b. Participation by specialty** - Marked differences existed among responding specialists in acceptance of Medicaid patients (see Table 2). As expected, hospital-based physicians were least likely to discriminate among patients based on source of payment. Among primary care office-based physicians, family/general practitioners and pediatricians appeared to have a particularly high rate of participation: 61 and 62%

of physicians in each of these two specialties responding accept "all" patients. But only 30% of obstetrician/gynecologists and 28% of internists responding do so. Urologist and general surgeon responders indicated high rates of "all" patients acceptance (77% and 70%).

**c. Participation relative to urban or rural practice location** - Differences also existed between physicians located in urban and rural settings as to their likelihood of accepting all Medicaid patients, with rural-located physicians being 45% more likely to do so (see Table 1).

## Ranking of factors affecting participation

Table 3 compares level of participation (acceptance of "all", "some", or "no(ne)" Medicaid patients) to barriers to participation cited as "very important" by respondent physicians. By far the most frequently cited barrier was "low reimbursement" (84%, 90%



TABLE 3

PERCENT OF PHYSICIANS AT EACH PARTICIPATION LEVEL RANKING BARRIER AS "VERY IMPORTANT" REASON PHYSICIANS DO NOT PARTICIPATE OR LIMIT PARTICIPATION IN MEDICAID

BARRIER	Degree of acceptance of Medicaid patients		
	All	Some	None
<i>Payments too low</i>	84	90	92
<i>Medicaid patients' misuse of health care system</i>	54	60	67
<i>Payments unpredictable</i>	46	56	72
<i>Program regulations too complex</i>	45	51	66
<i>Not all services covered <sup>1</sup></i>	41	43	54
<i>Too much time required to complete paperwork</i>	39	41	63
<i>Regulations interfere with provision of high quality care</i>	35	43	63
<i>Too much time required to receive payment</i>	35	37	56
<i>Medicaid patients more likely to sue than private patients</i>	23	29	39
<i>State law requiring Medicaid income reporting <sup>1</sup></i>	26	25	31
<i>Medicaid patients make practice unattractive</i>	18	26	38
<i>Not all drugs covered</i>	22	19	27
<i>Unfavorable provider fraud/abuse publicity discouraging</i>	17	20	35

<sup>1</sup>  $p > 0.05$ , using one-way analysis of variance. In all other rows,  $p < 0.05$ .

and 92% in the "all", "some", and "none" categories, respectively). "Recipient misuse of the health care system" was the second most frequently cited factor as being a "very important" barrier to participation, followed by "unpredictable payments", and "too complex program regulations." Significant differences existed between each of the three levels of participation for every barrier except two, and

is probably best explained by the generally more negative responses of physicians who claimed that they did not participate in the Medicaid program.

#### Program changes necessary to increase participation

Table 4 displays the respondents' assessment of the likelihood that each of three hypothetical pro-

TABLE 4

LIKELIHOOD THAT EACH OF THREE HYPOTHETICAL CHANGES IN THE MEDICAID PROGRAM WOULD INCREASE PARTICIPATION.

HYPOTHETICAL CHANGE	Degree to which change would affect participation		
	"Very likely"	"Somewhat likely"	"Not likely"
<i>Increase Medicaid fees by 10-20% (N = 1313) <sup>1</sup></i>	54.1 <sup>2</sup>	33.0	12.9
<i>Faster turnaround on payments than current 14 day average (N = 1307)</i>	45.9	37.5	16.6
<i>Fewer restrictions on services or drugs (N = 1308)</i>	42.8	34.8	22.4

<sup>1</sup> Number of physicians responding to specific questions.

<sup>2</sup> Percent of N for row.



posed changes in the Medicaid program would make it likely for physicians to either begin accepting Medicaid patients or to increase the number of Medicaid patients they currently accept.

We wished to determine which of the above 3 options would be most important to increasing participation. Of the 1248 responses to the question, 1003 (80%) indicated increased fees as most important; 163 (13%) felt that fewer restrictions on services or drugs was most important; and 82 (7%) listed faster turnaround time on Medicaid payments as the most important.

## DISCUSSION

The Mississippi Medicaid program, like Medicaid programs in other states, has experienced significant changes in the past several years, primarily as a result of expanded eligibility options and mandates brought about by federal Omnibus Budget Reconciliation Acts since 1985. A matter of concern to policymakers has been whether, given the potential for medically indigent individuals to gain access to the "mainstream" of health care in the state, physicians participate in the program to a sufficient degree to allow such access.<sup>11</sup> Since there has been widespread awareness and enforcement of regulations contained in the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) pertaining to care received in hospital emergency rooms, it is intuitive that indigent persons with life-threatening illnesses have ready access to care in such facilities. Information is lacking, however, regarding the extent to which indigent individuals have a reliable, continuous source of care for more chronic conditions, as well as for preventive health care. Also, to our knowledge no Mississippi-specific study has been carried out relating Medicaid eligibility and utilization to health status, such as was done by Kasper.<sup>12</sup> Thus, no statement can be made at this time on the degree to which physician participation in Medicaid relates to the overall state of health of Medicaid recipients, compared to the health status of the general population.

This report describes an attempt to evaluate the access Medicaid recipients have to office-based, privately practicing physicians in Mississippi, and focuses on statewide physicians' participation in the Medicaid program.

The survey described follows several studies of national scope, as referenced above, as well as two Mississippi-specific studies of physician participation in the Medicaid program reported by Garner et al<sup>4</sup>

in 1979, and by Weaver et al<sup>7</sup> in 1986. Our findings are not substantially different from the latter two studies. However, since different methodologies were used, temporal comparisons cannot be made. The present study is a gauge by which policymakers can gain insight into the continuing challenge to provide health care to all individuals, regardless of payment source. Our study is unique in that it is the only one to our knowledge performed by a physician provider organization (the Mississippi State Medical Association); a state governmental agency (the Division of Medicaid); and a state university (the University of Southern Mississippi). This was done primarily to generate a high response rate from physicians, and to draw on the special expertise available in a university. We believe that this partnership also demonstrated widespread physician awareness of and concern about health care for the indigent, as well as interest in the operation of the Mississippi Medicaid program.

Our survey once again revealed that in Mississippi, as elsewhere, inadequate reimbursement is perceived by responding practicing physicians as the most important barrier to full participation in the Medicaid program.<sup>3,6,8,11,13</sup> While we have not systematically analyzed physician payments as a percentage of usual and customary charges, we estimate, based on data supplied by the Division of Medicaid, that payments for most commonly performed procedures average less than 50% of such charges. Physicians may find it difficult or impossible to serve a significant number of Medicaid patients if their practice overhead costs are equal to or greater than this fraction. We did not attempt to assess respondents' knowledge of recent or pending increases in payments for office visits, especially for pediatric and obstetrical services. Since adequate reimbursement for such services was mandated by Congress at approximately the same time (December 1989) that our survey was initiated, it is unlikely that responses concerning reimbursement were significantly influenced by this legislation.

In spite of concerns about low reimbursement, over 53% of respondents to our questionnaire stated that they participated fully in the Medicaid program, and another 40% did so to a limited degree (see Table 2). Since less than half of the 3051 physicians who were mailed surveys returned them, we are unable to accurately relate the degree to which this variable was important to all state physicians. We have no reason to assume that reimbursement would be less important among non-responders. The perception itself



that Medicaid reimbursement is low could have been a factor in whether a physician completed and returned our survey questionnaire.

A future task will be to relate the variable of "low reimbursement" on surveys such as the one we report to dollar payments earned in the Medicaid program by individual physicians, such as was done to a certain degree by Garner, Liao, and Sharpe.<sup>5</sup> Such information might prove more reliable than respondent-derived information. Kletke et al<sup>14</sup>, for example, reported that physicians overestimated by 40 percent the degree of their participation in the Medicaid program. In addition, information supplied by the Mississippi Division of Medicaid shows that, for state fiscal year 1988-89, 32% of physicians licensed in Mississippi were paid \$10,000 or more in Medicaid claims, while 44% were paid \$5,000 or more. Information of this type is available for specialty practitioners, by county, and is currently being updated.

One other constraint bears emphasis in interpreting responses concerning reimbursement. A practitioner's perception of the adequacy of reimbursement may depend, among other factors, on 1) the amount of Medicaid payment relative to his or her usual and customary charge for the same service, or to the payment by other third party payors for that service; 2) the supply of physicians in the practitioner's service location, and the competition for Medicaid dollars; 3) the cost to the practitioner of providing services to patients; and 4) the demand for the practitioner's services by Medicaid recipients in the service location. The influence of these and other economic factors of physician reimbursement have been discussed in the literature.<sup>11, 15-17</sup>

The second highest ranking variable perceived by our survey respondents as being "very important" in determining participation is "Medicaid patients' misuse of the health care system," defined in our questionnaire as missed appointments, excessive use of the emergency room, failure to comply with treatment, and sharing use of Medicaid card with another individual. Since the question had four parts, it is not possible to determine which element(s) a particular respondent had in mind when ranking the factor. A more precise response might have been elicited by a selection option such as "Medicaid patients are, as a group, more difficult to care for than non-Medicaid patients." Nevertheless, it is interesting that this variable was ranked by responding physicians in the Garner study as the greatest disadvantage to society of the Medicaid program. In contrast Weaver et al reported that "broken appointments" and "type patient"

ranked eighth and ninth of ten reasons for limited participation of primary care physician survey respondents.

National and state studies have generally not evaluated the importance of specific "Medicaid recipient characteristics" in determining physician Medicaid participation. This is not surprising, since people share many behavioral and personal characteristics, regardless of source of payment for health care. Based upon numerous private conversations with physicians, however, we believe that a perception exists among some physicians that a) "Medicaid patients" can be readily identified, and that b) a significantly larger number of Medicaid patients in a practice will make it unattractive to private pay patients. Responses to this specific issue in our questionnaire (see Table 3) may be understated.

Medicaid administrative factors, including service coverage policies, appeared to be less important, though still significant, barriers to participation when compared to inadequate reimbursement. When asked about the likelihood that each one of three hypothetical administrative changes would positively affect participation, over half (54.1%) responded that a 10-20% increase in fees were "very likely" to do so, while 33% felt that such a change would be only "somewhat likely" to do so (see Table 4). We cannot discern whether the 33% thought that such an increase in payments would simply be insufficient to increase participation (i.e., a 50% increase *would* be sufficient); or whether they felt that physicians who limited their participation were unlikely to begin or increase participation due to other barriers considered to be more important deterrents. However, in the survey question which followed immediately, over 80% listed the fee increase as the most important change that could be made.

Finally, we had anticipated that the perception that Medicaid patients were more likely to sue physicians than non-Medicaid patients would be a frequently-cited barrier to participation. However, only 17-18% of respondents in each of the three participation categories ranked this factor as "very important." This may indicate that physicians have become familiar with both national and state-specific data showing that Medicaid recipients, as a group, are much less likely to file claims and/or lawsuits than are patients having collateral source payments for services.<sup>3,18</sup>

Respondent age appeared to have no bearing on Medicaid program participation, while rural practice location was positively related (see Table 1). Our finding that the specialties of family/general medi-



cine, pediatrics, and surgery had relatively high rates of acceptance of all Medicaid patients, while obstetrician/gynecologists did not is consistent with other reported data.<sup>9,13,19-22</sup> Variables which this study did not attempt to evaluate were sex of respondent; whether the respondent graduated from medical school outside the United States; whether the respondents' practices were saturated (i.e., whether they currently accepted *any* new patients, regardless of source of payment); non-physician personnel costs, or practice costs; per capita income relative to postal zip code; and the degree to which the respondent perceived a responsibility by society to provide care for the medically indigent.

We are unable to make any inferences about trends in physician participation in the Mississippi program, since there are significant methodological differences between our study and the two other reported Mississippi-specific studies. We believe that Division of Medicaid claims data relating total Medicaid earnings to respondent-derived assessments of program participation will enable better analysis over time of the impact of modifications of the program, particularly administrative modifications, on participation rates.

In conclusion, lack of adequate reimbursement is perceived by Mississippi physicians to be by far the most important barrier to physician participation in the Medicaid program. Since provider reimbursement rates rest largely with the state legislature (except when modified by Congress), and since the state economy is presently experiencing revenue shortfalls<sup>23</sup>, the probability that increases in physician reimbursement, and therefore expanded access to office-based care for medically indigent persons, is uncertain. However, since OBRA '89 mandated that reimbursement rates for obstetrical and pediatric services must be sufficient to ensure that Medicaid recipients are seen by physicians to the same degree as non-Medicaid patients in a given geographic location, a "natural experiment," such as those described by Gabel and Rice<sup>11</sup>, will soon occur in the state, and will provide insight as to the effect of fee increases on provision of these services by privately practicing providers.

Further research is needed to more accurately characterize the determinants of physician participation in the state's Medicaid program.

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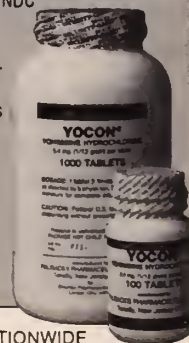
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# Legislative Modifications to the Mississippi Medicaid Program in 1990:

## Part I. Financing, Eligibility, and Services

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With the growing realization that the Mississippi Medicaid program has been the best means available to provide medical services to medically indigent individuals, providers of health care in the state have long advocated its expansion. The federal financial participation (FFP; federal contribution to the cost of the Medicaid program) is currently 79.93% in Mississippi. Policymakers, aware of the unique advantage of the highest FFP rate of any state, have taken aggressive steps to maximize federal Medicaid dollars, rather than use state dollars, to pay health care costs for the state's medically indigent citizens. After federal matching, more than 80 cents of every state dollar appropriated to the program is returned to the state's general and special funds. Adequate funding of the Medicaid program has thus become a major state priority.

The legislative process was significantly influenced in the 1990 session by mandates imposed upon states' Medicaid programs by Congress via the Omnibus Budget Reconciliation Act of 1989 (OBRA '89). The mandates were largely unaccompanied by increased federal dollars and, nationwide, state governments have had difficulty in identifying sources of funding for implementation. Moreover, states were required to implement some of the mandated changes as early as April 1, 1990 which dramatically compressed their response times.

This two-part article reports major changes brought about in the Mississippi Medicaid program as a result of both federal and state legislation. Part I describes

modifications including financing, eligibility, and services. Part II will discuss reimbursement and other changes.

### FINANCING

Mississippi Senate Bill 3183 approved a deficit appropriation request for FY 1990 of \$3.5 million, thereby raising the total *state* appropriation for FY 1990 from \$122.6 million to over \$126 million, and the *total* appropriation to over \$600 million.

Senate Bill 2769 increased the maximum allowable state share spending authority (cap) of the Medicaid program from \$134.5 million for FY 1990 to \$160 million for FY 1991. House Bill 1621 appropriated over \$142.4 million in state funds to the program for FY 1991, bringing the total budget, after federal matching, to over \$700 million. Early reports of increased utilization of the program by eligible Mississippians indicate that even this generous level of funding may be insufficient to finance authorized program enhancements.

### ELIGIBILITY

House Bill 1467 implemented the OBRA '89 mandate requiring coverage for children (a) in families whose incomes do not exceed 133% of the federal poverty level (FPL), which is currently about \$16,300 in a family of four, and (b) who have not reached their sixth birthday. The Division of Medicaid has es-



timated that this provision will offer coverage through the Medicaid program to an additional 14,000 low income children in Mississippi.

OBRA '89 mandates that Medicaid provide Medicare Part A premium payments for certain disabled workers who had previously qualified for Medicare because of their disability, but who then lost Medicare coverage because of increased earnings. Division of Medicaid staff estimate that no more than 100 persons will be eligible for such coverage in Mississippi. This provision was effective July 1, 1990.

The Family Support Act of 1988 has at least two provisions which impact the Medicaid program in 1990. The first provides up to 12 months of so-called "transitional coverage" to families in which the principal wage earner returns to employment and whose earnings exceed the welfare eligibility income limits. This provision became effective April 1, 1990. The second provision extends Medicaid coverage to certain two-parent families in which the principal wage earner has become recently unemployed. This provision was effective October 1, 1990.

Two other eligibility provisions for children that had been supported by the Division were not enacted, having been displaced by the OBRA '89 mandates. The first would have provided coverage for children ages 18-21 years in certain low-income families (50% FPL). The second was a provision for the continued "phase-in" of children up to age 8 years in families with incomes not exceeding 100% FPL (approximately \$12,700 for a family of four).

## SERVICES

House Bill 1467 provided for greatly expanded services, some of which are federally mandated, while others are attributable to state initiatives. Expanded services include:

### Children's Services

The Early and Periodic Screening, Diagnosis, and Treatment Program (EPSDT) is a childhood preventive health program which provides payment to providers for preventive health maintenance, or anticipatory care, for children under 21 years of age who are on Medicaid. As of April 1, 1990 all states are required under OBRA '89 to provide reimbursement to "correct or ameliorate defects and physical and mental illness and conditions discovered by the screening services. . ." covered by the federal Medicaid program, regardless of whether the required services are

covered by the Mississippi Medicaid program. This legislation requires that states provide services that are "medically necessary," a term presently left for states to define. For example, a child under age 21 years who is determined by his or her physician to need services exceeding the present state limits (such as 12 physician clinic visits per year, 30 days hospitalization per year, or 5 prescriptions per month) may receive such additional services if it is determined by the Division of Medicaid that such services are indeed "medically necessary."

The periodicity schedule of preventive care screening visits is established in Mississippi according to recommendations promulgated by the American Academy of Pediatrics. OBRA '89 further requires that children be allowed to receive certain *interperiodic* screening visits.

### Nurse Practitioners

OBRA '89 mandated that states reimburse family or pediatric nurse practitioners, or nurse midwives, "whether or not the nurse practitioner operates in association with, or under the supervision of, a physician or other health care provider." House Bill 1467 extended authority to reimburse directly for these services to *any* class of nurse practitioner practicing under authority of the state's Nursing Practice Act.

### Psychiatric Services

For many years, states have had the option of providing psychiatric services for individuals under age 21 years in psychiatric facilities. Reimbursable services include acute and long-term treatment for both intrinsic disorders such as schizophrenia or depression, and extrinsic disorders such as substance abuse. Until now, the Mississippi Medicaid program has paid for these services only when rendered in acute care general hospitals. As of July 1, 1990 reimbursement for treatment in free-standing psychiatric centers, both acute and long-term, is authorized by House Bill 1467. This legislation provides for the treatment of persons less than 21 years of age for up to 45 days in such an acute setting, and indefinitely in a long-term care setting. House Bill 325, the "certificate of need" bill for 1990, limits the number of beds authorized in each of these types of facilities.

### Managed Care Pilot Programs

States have been encouraged in recent years to stimulate the development of "managed care" facilities, wherein contractual primary care providers furnish coordination of health care to all recipients within



a designated catchment area. Costs of such operations may not exceed the "fee-for-service" costs previously documented in that area. Benefits of such initiatives include cost containment via more judicious specialty referrals; education of recipients in the appropriate utilization of health care facilities; and generally enhanced care management, including utilization of such professionals as social workers, nutritionists, and health educators. House Bill 1467 authorizes the Division of Medicaid to establish two such pilot programs in the state. Public and/or private providers may be utilized.

### Medical Supplies

House Bill 1467 authorizes the Division of Medicaid to pay costs for certain medical supplies. This provision relates largely to persons who (a) are over the age of 21, since medical supplies needed by children under age 21 years will be provided under the EPSDT program; (b) have exhausted the 50 home health visits allotted per year, since medical supplies are currently provided to persons receiving home health services; or (c) utilize durable medical equipment, but do not receive home health visits. Because the law limits payment of such medical supplies to \$300,000 in state appropriated funds (approximately \$1.5 million in total funds), the Division plans to limit payment for supplies only to those which accompany use of durable medical equipment.

### Birthing Centers

For the first time in state law, services in birthing centers are reimbursable by the Medicaid program. The creation of such facilities is not addressed in the certificate of need bill (House Bill 325), and presumably any entity capable of providing services in accordance with state regulations may function as a birthing center, including existing hospitals.

### Hospice Services

Finally, House Bill 1467 authorizes reimbursement after July 1, 1991 for certain well-defined services in a "pilot" hospice setting, limited to one site in Hinds County as determined by the Division of Medicaid. This provision stands repealed after June 30, 1991, unless the Legislature removes the repealer provision prior to that time.

## DISCUSSION

The initial state appropriation to the Mississippi Medicaid program in FY 1988 was \$88 million which,

when matched, provided nearly \$384 million to providers for care of recipients. Authorized state appropriation for FY 1991 is \$142.4 million, providing over \$707.4 million in total funds for such care. Eligibility has been expanded in the past year by direction of Congress, displacing some of the options recommended by the state. Finally, services have been dramatically enhanced, particularly for children, again by federal mandate, and with no identifiable commensurate funding options for states. Given the continuing escalation of health care costs (up to 20% per year) in the Mississippi Medicaid program, the program is likely to experience a sizeable deficit during the present fiscal year.

Part II of this report will focus on reimbursement issues, as well as other modifications to the Mississippi Medicaid program.

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# Legislative Modifications to the Mississippi Medicaid Program in 1990: Part II. Reimbursement and Other Changes

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Part I of this report addressed changes to the Mississippi Medicaid program concerning financing, eligibility, and services. Part II describes modifications in reimbursement policy resulting primarily from the federal Omnibus Budget Reconciliation Act of 1989 (OBRA '89), as well as other important changes in the program, due to state initiative.

## REIMBURSEMENT

### Obstetrical and Pediatric Services

The Code of Federal Regulations (CFR) has for many years required at 42.447.205 that Medicaid "agency's payments must be sufficient to enlist enough providers so that services under the plan are available to recipients at least to the extent that those services are available to the general population." OBRA '89 partially codifies the regulation referenced above by specifying that reimbursement for obstetrical and pediatric services meet this requirement. Family practice physicians and nurse practitioners are included, as well as obstetrical and pediatric specialists. The statute specifies that only non-institutional services are affected; for example, obstetrical delivery fees paid to physicians can be favorably modified by this law, but the per diem payments to hospitals where the delivery occurs are not.

Current federal regulations appear to afford states three options to comply with the new law:

- a. States can demonstrate that at least 50% of

providers within *every* geographic region of the state accept both referred and non-referred Medicaid patients.

- b. State Medicaid agencies can show that payment rates for obstetrical and pediatric services are not less than 90% of the "usual and customary" rates paid providers. It appears that the definition of "usual and customary" relates to rates paid by private carriers in the state.

- c. States may formulate unique reimbursement plans which must still be approved by the Health Care Financing Administration (HCFA).

### Pharmacists' Fees

Medicaid reimbursement to pharmacists is based on two factors: the dispensing fee, and the "ingredient" cost. The Mississippi Division of Medicaid has always reimbursed pharmacists a dispensing fee at a single statewide rate. The 1989 Legislature approved an increase in the *dispensing fee* to \$3.75 from its prior level of \$3.33, a 12.6% increase. Pharmacists' *prescription ingredient costs* have been reimbursed by Medicaid according to the widely-published Average Wholesale Price. (AWP). Ingredient costs have been regularly adjusted, almost always upward, to follow increases in costs to the pharmacists from the manufacturers.

For the past several years, HCFA has maintained that an Estimated Acquisition Cost (EAC) based on AWP was artificially high, and that most pharmacists were being given discounts off the AWP, usu-



ally based on such factors as volume purchased and early payment. The Division of Medicaid agreed with HCFA in early 1990 to base its EAC on a formula of AWP minus 10%. Thus, prior to May 1, 1990, a prescription which had cost the program \$20.00 in ingredient cost began costing the program 10% less, or \$18.00, after that date, assuming the published AWP remained constant. The 1990 Legislature authorized the Division to pay the difference (\$2.00 in the example cited above) in the form of an increase in the dispensing fee. Since it would have been impossible to determine an individual dispensing fee for each drug in the formulary, the Division increased the state-wide dispensing fee from \$3.75 to \$4.79, based upon its best estimates. The Division will analyze reimbursement to pharmacists to ensure that, in the aggregate, reimbursement is the same as that under the methodology existing prior to May 1, 1990.

### **Nurse Practitioner Services**

Prior to July 1, 1990 the Division of Medicaid reimbursed certified nurse midwives at 75% of the fees paid to physicians by Medicaid, and certified registered nurse anesthetists at 90% of these physician fees. OBRA '89 allows nurse practitioners providing obstetrical and pediatric services to be directly reimbursed. The Legislature amended state law to further allow any nurse practitioner to be directly reimbursed by the Division of Medicaid at up to 90% of fees paid to physicians by Medicaid. Since the majority of nurse practitioners and nurse midwives in Mississippi are employed by the State Department of Health, the Division does not anticipate a significant financial impact of this legislation on the program.

### **Ambulatory Services in Federally Qualified Health Centers (FQHCs) and the State Department of Health**

OBRA '89 requires state Medicaid agencies to pay "100% of reasonable costs" to FQHCs. Currently, 20 such centers operate in the state. The 1990 Legislature went beyond the federal requirement cited above, and authorized the Division to similarly reimburse the State Department of Health for ambulatory services. Thus, on July 1, 1990 the Division of Medicaid ceased reimbursing the State Health Department for ambulatory services on a fee-for-service basis, and now reimburses at cost.

### **State-Owned Nursing Homes**

Since the inception of the Medicaid program in Mississippi, all nursing homes, whether state-owned

(such as the Jacquith Nursing Home at the Mississippi State Hospital) or privately-owned, have been reimbursed using a cost-based formula according to (a) facility size, and (b) level of service function (skilled, intermediate, or dual). Reimbursement has been made on a prospective basis; that is, nursing home rates are determined each year, based on cost reports, and beginning in July of each year the revised per diem is paid, plus a bonus of \$2.00 per day per bed if costs are kept below a certain cap.

Mississippi took advantage of federal law allowing states to reimburse state-owned nursing homes at different rates and according to different methodologies. This authorization became effective July 1, 1990.

## **OTHER CHANGES**

### **Nursing Homes Become Nursing Facilities**

As a technical correction to comply with the Nursing Home Reform Act of 1987, state law was modified in 1990 to designate all existing and future nursing homes as "nursing facilities," thereby dropping the designation of either "skilled" or "intermediate." No later than October 1, 1990 all nursing homes in the state must meet federal and state regulations requiring them to care for patients needing either level of service. The state is also participating in a federally-sponsored pilot project to begin reimbursement to nursing homes at a future date based on the resources (labor, time, supplies, etc.) required for an individual patient. Reimbursement after that date will be based on care given to an individual, and will afford the state an improved mechanism for monitoring the quality of care rendered to nursing home residents.

### **Emergency Ambulance Services**

For many years, state law has authorized only two classes of individuals to certify the medical necessity of emergency ambulance services: physicians and law enforcement officers. Physicians have often been reluctant to perform this duty, since they may not have been familiar with the circumstances which initiated the service. As a result, ambulance companies have often been unduly inconvenienced, and many times have been unable to claim reimbursement for an ambulance trip made in good faith. House Bill 1467 attempted to correct that situation by authorizing emergency medical technicians to certify the necessity of the trip. Although it may appear that this legislation is a case of "putting the fox in charge of



the hen house," the Division supported this legislation because of the unduly restrictive nature of the former regulations.

### The 'Donated Funds' Provision

Several states, such as Alabama, Tennessee, Florida, and West Virginia, have turned to "creative financing" in recent years to enhance state match to draw down federal Medicaid dollars. Tennessee, for example, has made it possible for certain hospitals, both public and private, to donate funds to the state's Medicaid program. By taking advantage of the "disproportionate share allowance", that state is then able to guarantee that donating hospitals receive, via their per diem rate, reimbursement that is significantly greater than the amount of funds donated. The Mississippi Medicaid program was authorized in House Bill 1467 to accept such donated funds.

At least two problems exist in making this a significant funding mechanism for the state. First, HCFA is presently circulating regulations which would dramatically curtail such donations. Second, providers, such as hospitals, are rightly concerned that state government might at some point in the future fail to maintain its "maintenance of effort." That is, the state might come to depend on such donated funds to replace appropriations from the general fund.

### Reporting of Provider Earnings

Several years ago, provision was made that institutional earnings totaling \$25,000 or more per year, and individual earnings totaling \$10,000 or more per year be reported to the Governor and the Legislature annually. The rationale for this requirement was clear: providers earning in excess of these amounts could be easily singled out for special auditing in an attempt to detect fraud and abuse. The Division of Medicaid petitioned the Legislature to repeal this provision for the following reasons. First, the monetary limits were never adjusted to keep pace with inflation. The dollar amount should have been adjusted upward annually, at a minimum. Second, far more sophisticated methodologies are presently being utilized by the Division to detect fraud and abuse than that of monitoring provider earnings. Finally, some providers expressed reservation about increasing their participation in the program, or even participating at all, since the report as furnished to the Governor and the Legislature was generally widely circulated each year. For example, it became a major feature in the *Annual Report* of the Division of Medicaid. Many providers felt that this reporting requirement unfairly

portrayed them as taking undue advantage of the Medicaid program.

The 1990 Legislature repealed this reporting provision in its entirety.

### DISCUSSION

The federal government, particularly Congress, has clearly demonstrated its intent that continuation of unfairly low reimbursement rates to providers, especially physicians, is a barrier to obtaining health care services by medically indigent persons. For the first time, Congress has mandated that states more equitably reimburse both individual providers of obstetrical and pediatric services, as well as certain institutional providers such as federally qualified health centers. Furthermore, Congress mandated in 1989 that the Physicians' Payment Review Commission, established in 1987 to recommend physician reimbursement rate adjustments to Congress in the Medicare program, make recommendations during calendar year 1990 concerning reimbursement under the Medicaid program. Finally, Congress made clear its intention that state Medicaid programs utilize non-physician providers, such as nurse practitioners.

The requirements of OBRA '89 reflect a growing commitment by the federal government to utilize state Medicaid programs as primary funding mechanisms to provide health care to needy individuals. Moreover, the Governor and the Mississippi Legislature have demonstrated their responsiveness to human needs in the state by appropriating additional funds to support the costs of health care of the state's needy citizens through the Medicaid program. However, availability of state funding will become a matter of increasing concern in fiscal years 1991 and 1992 due to the expanded eligibility, services, and reimbursement requirements.

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# A Profile of the Medically Uninsured in Mississippi

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The crisis of medical indigence has been the focus of a national debate that has grown louder and received more attention as growing numbers of people lose or are denied access to health insurance coverage - both private and public. In Mississippi, the numbers of uninsured persons (those without public or private insurance) have been recently estimated to be between 500,000 and 600,000.<sup>1</sup> In a state struggling to improve its socioeconomic status, numbers of this magnitude have impact on all sectors of the economy.

Medicaid reform is often mentioned as the primary vehicle for improving health care access for the poor (family income of less than 100% of the federal poverty level\*) and near-poor (family income between 100% and 125% of the federal poverty level). The recently released report from the Pepper Commission, the U.S. Bipartisan Commission on Comprehensive Health Care, reflects attempts to solve the crisis. However, no concrete funding or implementation mechanisms were offered.<sup>2</sup> While the debate goes on at the national level, policymakers in Mississippi have already taken steps to fill in the health care gaps (refer to the reports in this issue by Smith et al), but needs still exist.

A grant by the Robert Wood Johnson Foundation to the Mississippi Medicaid Program in 1988 enabled a major review and analysis of the program to determine, among other things, how the program could be expanded and modified to extend health care coverage to the indigent. As part of this effort, the grant provided

support for a study to estimate the prevalence of the uninsured in Mississippi. These data were considered essential in planning future Medicaid expansions. This report presents the findings of our study of Mississippi's uninsured, and makes it possible to better calculate the number of individuals potentially eligible for future coverage by the Medicaid program, as well as by other private and public innovations.

## METHODOLOGY

Two independent national data sources were used to develop estimates of the uninsured in Mississippi. The first was the Current Population Survey (CPS) for March, 1988. The CPS is a monthly survey of 60,000 households throughout the nation conducted by the Bureau of the Census. Beginning in 1942, the survey has provided estimates of employment, unemployment and other characteristics of the general labor force of the population. In March of each year, the Bureau of the Census adds questions on health insurance, income and work experience. Thus, the CPS has become the most frequently studied source of information on the uninsured. Though initially designed to obtain national estimates, recent expansions of the sample have increased its reliability for states. The Mississippi monthly sample consists of 950 households. Due to nonresponse, about 750 households were finally interviewed. Data were collected on each adult household member so that about 1,500 individual responses were included in the March 1988 Mississippi sample. The Mississippi responses to that survey were tabulated at the Urban Institute, a non-profit public policy research center in Washington, and forwarded to one of the authors (RHL)

\* Federal poverty level is an index based on the income that households need to eat adequately without spending more than one-third of their income on food. This level is revised annually and varies by the household size.



for analysis.

The second data source for estimates of the uninsured was the National Medical Expenditure Survey (NMES). Implemented in 1987 by the Agency for Health Care Policy and Research (AHCPR) in Washington, NMES was designed to provide national and regional estimates of health insurance coverage and to measure health services utilization and expense for the U.S. over a twelve month period. AHCPR prepared a cross tabulation of the southeastern region's age-specific and race-specific distribution of the uninsured, which was then analyzed by one of the authors (RHL). This distribution of the uninsured was applied to Mississippi counties' age and race population distributions. Inclusion of the race-specific rates of the uninsured in the calculation allows for partial adjustment of income bias in the estimation of insurance coverage.

## RESULTS

### Validation of the Data

Data collected in the March 1988 CPS show that 467,000 Mississippians (18% of the total population) did not have any health insurance, either public or private. This rate is identical to that obtained from the

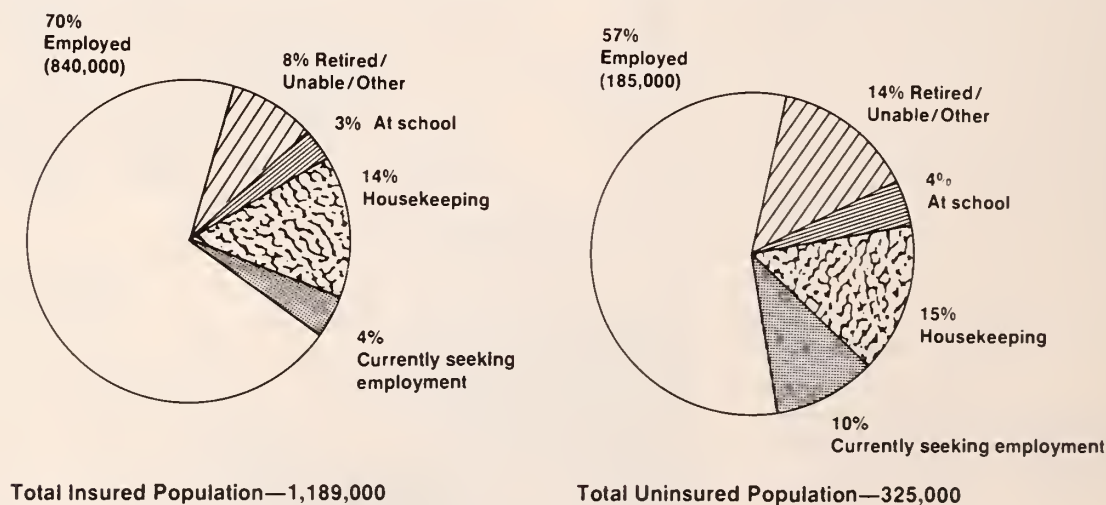
NMES data and is considerably higher than that observed for the southeastern region (13.4%) and for the U.S. as a whole (12.9%) by the March 1988 CPS.<sup>3</sup>

The fact that the total count of uninsured from two sources (two different surveys conducted by two different organizations) is the same validates the results reported here. Though there is a similarity in the way the samples are drawn - the household is the basis for selection - the two surveys have a different focus and structure. The CPS deals primarily with employment and income: health insurance questions are posed at the end of the March survey. The NMES focus is on health: questions are targeted toward health status and medical expenditures.

### Employment Status and Health Insurance

Data from the CPS show that of the 467,000 Mississippians without any kind of health insurance, 325,000 (70%) were 18-64 years of age. The employment status of these uninsured, as well as of insured Mississippi residents 18-64 years of age, is compared in Figure 1 below. The pie chart on the right shows that among the 325,000 uninsured nonelderly adults, 185,000 (57%) were employed.\* This proportion is larger than the 53% observed nationally.<sup>3</sup> Among the uninsured, almost 33,000 (10%) were "currently seeking employment" (also identified by the Bureau of the Census as "the

Figure 1: Employment Status of Nonelderly Mississippi Adults, Ages 18-64, by Health Insurance Status, 1988.

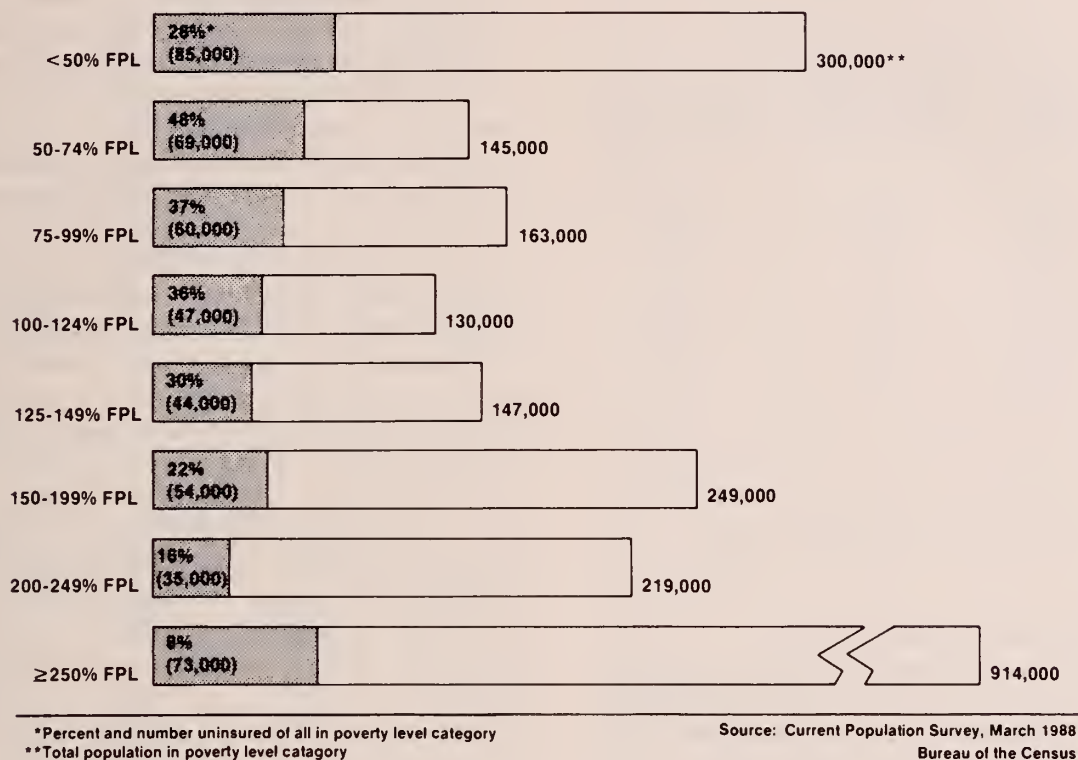


Source: Current Population Survey, March 1988  
Bureau of the Census

\* Due to the small sample size, it was not possible to define employment more specifically, e.g., full or part-time, or seasonal.



Figure 2: Number and Percent of Uninsured of Total Mississippi Population by Family Income Relative to the Federal Poverty Level (FPL) for Individuals < 65 Years of Age, 1987.



unemployed"). Note that there are almost 6 times as many employed as unemployed uninsured individuals.

The three remaining categories of the 325,000 uninsured nonelderly adults were not considered by the Bureau of the Census as part of the labor force, and included 15% engaged in housekeeping, 14% retired or unable to work, and 4% in school.

### Income and Health Insurance

The relationship of family income (expressed as a percent of the federal poverty level, or FPL) and public assistance programs to health insurance status of Mississippi residents less than 65 years of age is shown in Figure 2. In 1988, when these data were collected, single mothers whose income was below 44% FPL were eligible for welfare programs and Medicaid assistance, provided they met certain resource limitations. Thus, of the 300,000 persons in Mississippi with family income below 50% FPL, 72% were covered by publicly-sponsored health insurance, leaving 85,000 unin-

sured (28%) in that income category. As family income rises to between 50 and 74% FPL and eligibility for most public assistance programs is more restrictive, the proportion of uninsured among the 145,000 persons in this income category almost doubled to 48%, even though the absolute numbers are lower. As expected, the probability of having insurance coverage rises for families with income >74% FPL, and there is a decline in the proportion of the uninsured. For individuals in families with annual incomes >199% FPL (>\$23,280 for a family of 4), the likelihood of being insured was higher. **But even at these higher income levels, an estimated 108,000 Mississippians lacked health insurance.**

### Age and Health Insurance

When the CPS data are grouped by age (see Table 1), children less than 18 years of age constituted 30% (142,000) of all the uninsured in the state. Among children, the age group with the largest *absolute* number of uninsured is that of 7-17 year olds: 89,000



children. The age group with the highest *proportion* of uninsured (column three) was among the 18-21 year olds: almost one third of all young adults 18-21 years old were uninsured. The remaining 279,000 uninsured persons were nonelderly adults.

*Table 1: Distribution of the Uninsured by Age; Mississippi, 1988.*

Age	Number Uninsured	Percent Uninsured Within Age Group	Percent of All Uninsured in State
≤6	53,000	17%	11%
7-17	89,000	21%	19%
18-21	46,000	30%	10%
22-24	32,000	23%	7%
25-34	99,000	22%	21%
35-44	49,000	16%	10%
45-54	51,000	21%	11%
55-64	48,000	21%	10%
≥65	0	0%	0%
<b>Total</b>	<b>467,000</b>	<b>18%</b>	<b>100%</b>

Source: Current Population Survey, March 1988.

### Age, Income and Health Insurance

The CPS data are tabulated by family income and age (reported as a percent of the federal poverty level or FPL) in order to assess the relationship between income and age simultaneously on health insurance status. Figure 3 shows that children below 18 years of age in families reporting income <100% FPL were half as likely to be uninsured as individuals 18-64 years of age in that same income category. This is due to the general availability of Medicaid coverage to individuals less

than 18 years of age in very low income groups, but to a relatively limited number of individuals 18-64 years of age: the blind and disabled, single heads of households with dependent children and pregnant women with low incomes. Note that as family income rises from below 100% FPL to between 100 and 199% FPL, the proportion of individuals 18-64 years of age who were uninsured dropped by 35% (from 46% to 30%), but the proportion of children below 18 years of age who were uninsured remained at 23%. Again, as income rises to and over the 200% FPL, there is a drop in the proportion of uninsured for both age categories: a drop of 39% for those below 18 years of age, and a much more dramatic drop of 67% for those 18-64 years of age. These results reflect availability of health insurance for individuals 18-64 years of age as they enter the

*Table 2: Distribution of Individuals 18-64 Years of Age by Health Insurance Status, and Level of Completed Education, Mississippi, 1988.*

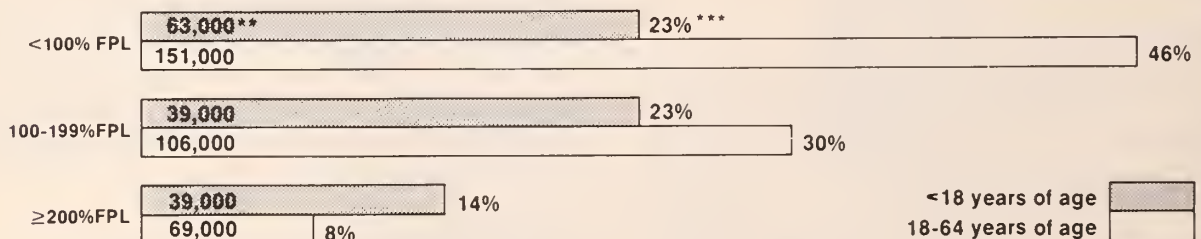
Insurance Status	Level of Completed Education		
	<High School	High School	College/+*
<b>Insured</b>	251,000 (64%)**	429,000 (79%)	521,000 (89%)
<b>Uninsured</b>	141,000 (36%)	117,000 (21%)	67,000 (11%)
<b>Total Population</b>	392,000 (100%)	546,000 (100%)	588,000 (100%)

\* Includes some college, college degree or graduate school

\*\* Percent uninsured of all population in that category of completed education.

Source: Current Population Survey, March, 1988

*Figure 3: Percent Uninsured of Mississippi Residents by Family Income Relative to the Federal Poverty Level(FPL)\*, and Age, 1988.*



**TOTAL UNINSURED—467,000**

Source: Current Population Survey, March 1988  
Bureau of the Census

\* 1987 Federal Poverty Level (100% FPL) for a family of four: \$11,200 per year

\*\* Number uninsured

\*\*\* Percent uninsured of all within age group and poverty level



workforce. But frequently such employer-provided coverage excludes dependent children because firms which self-insure are not subject to mandatory insurance regulations.

### Educational Level and Health Insurance

Table 2 shows that the proportion of nonelderly individuals without health insurance decreases dramatically as level of completed education rises: 36% for those with less than high school education, 21% for those with a high school education and 11% for those with any college or graduate school education.

### Source of Health Insurance Coverage

A summary of the source of health insurance coverage reported by Mississippians in the CPS is shown in Table 3. Of the 2,089,000 Mississippians reporting some health insurance coverage (82% of the total population), slightly more than half (1,485,000 or 58%) had private insurance or CHAMPUS, 24% had either Medicaid and/or Medicare. The uninsured (467,000) made up 18% of the population.

Age related patterns of insurance coverage observed on Table 3 reflect Medicaid eligibility requirements and the availability of employer-provided insurance which have been discussed earlier in this report.

Table 3: Distribution of the Population by Age and Health Insurance Source, Mississippi, 1988.				
Insurance Source	Age			
	<18	18-64	≥65	Total
Private Insurance (incl. Champus)	430,000 (58%)*	1,048,000 (69%)	**	1,485,000 (58%)
Medicaid	165,000 (22%)	94,000 (6%)	0 (0%)	259,000 (10%)
Medicare (may/may not incl. Medicaid)	**	36,000 (2%)	111,000 (39%)	151,000 (6%)
Other Combinations	0 (0%)	**	170,000*** (59%)	194,000 (8%)
None	142,000 (19%)	325,000 (21%)	0 (0%)	467,000 (18%)
Total	741,000 (100%)	1,526,000 (100%)	288,000 (100%)	2,555,000 (100%)

\*Percent of all in age category

\*\*Number too small to be statistically different from zero, but is included in the row and column totals.

\*\*\*Includes Medicare plus private supplemental insurance.

Source: Current Population Survey, March 1988.

Among the elderly, almost all report Medicare or Medicare plus private insurance.§

### DISCUSSION

Two sources of data on health insurance coverage - the Current Population Survey (CPS) and the National Medical Expenditure Survey (NMES) - estimate that 18% (approximately 467,000 persons) of the Mississippi population was without public or private health insurance in March 1988. These uninsured included 185,000 employed nonelderly adults 18-64 years of age (57% of the total uninsured) and 142,000 children below 18 years of age (30% of the total uninsured).

Although these CPS estimates of Mississippi's uninsured population reported for March 1988 can be viewed with confidence, there are two limitations to consider. The first is that although these data were the most recent available for analysis, they have aged between 1988 and the present. A number of Medicaid eligibility expansions enacted by the Mississippi Legislature have increased the number of enrollees substantially since March 1988 (refer to the two papers in this issue by Smith et al). These expansions include program categories that were implemented in recent years: in 1987 for pregnant women and infants with income <100% FPL regardless of family structure; in 1988 for children less than two years of age with income <100% FPL and pregnant women and their infants with income <185% FPL regardless of family structure; in 1989 for children less than 5 years of age with income <100% FPL regardless of family structure; for the elderly and disabled there have been annual increases in eligibility income thresholds since July 1989 to the current level of family income <95% FPL; in 1990 for children less than 6 years of age in families with income <133% FPL; and also in 1990 for certain families with income <42% FPL including unemployed parent(s), in the most recent federal mandate.

§ Technical Note: The total number of Medicaid enrollees reported by the March 1988 CPS is 259,000. This total does not include an estimate of the known 59,532 elderly on Mississippi's Medicaid program in 1988. This is because the Urban Institute combined the numbers of elderly individuals reporting Medicaid coverage with those reporting Medicare during editing of the raw data. The CPS' 259,000 total of nonelderly, however, is 135,000 less than the 393,998 nonelderly enrollees reported by the Medicaid program. This difference is due largely to the fact that the CPS numbers reflect respondents' insurance status as of March 1988, e.g., thus giving a point-in-time estimate.<sup>4</sup> National studies of Medicaid enrollment have shown that annual counts of enrollees "ever covered" exceed point-in-time estimates by 25% primarily due to fluctuation in income.<sup>5</sup> The small size of the Mississippi sample may also cause some statistical inaccuracies in the final count.



The second limitation is that CPS data are point-in-time estimates, i.e., respondents report insurance status as of March.<sup>4</sup> Longitudinal studies have shown that a large proportion of the poor experience short spells of poverty, and a smaller proportion remains poor over long periods of time.<sup>5</sup> This bimodal distribution of poverty is documented in long term studies of health insurance status. The recently published results of the Survey of Income and Program Participation (SIPP) have shown that over a period of 28 months 72% of all persons in the U.S. had continuous health insurance coverage, 28% were not covered for at least one month and 4% lacked any insurance for the entire period. Short-term fluctuations in health insurance status were demonstrated in this survey by the fact that the proportion of the population without insurance one or more months during the entire 28 months period (28%) was about twice the proportion uninsured in any one month (13-14%).<sup>6</sup> Thus, a point-in-time survey such as the CPS, cannot accurately count all the individuals in the population as they gain and lose health insurance. Long-term health insurance statistics at the state level have not been available from such surveys as the SIPP. The resulting underestimates of the uninsured are problematic for program policymakers and managers at the state level in predicting budget needs.

Even with these limitations, the CPS remains the primary and continuing source of information about the uninsured for the states. The CPS profile of the uninsured of Mississippi includes the poor, the near-poor and the nonpoor. Our report demonstrates the relationship of family income, education, trends in the workplace, and eligibility requirements for public assistance programs to insurance status.

As expected, education was positively related to insurance status: the likelihood of insurance coverage was greater with higher levels of completed education. Education and insurance coverage are directly related to employment and income. However, employment does not guarantee insurance coverage. **Our data showed that there were 6 times as many employed as unemployed uninsured individuals (185,000 vs. 33,000).** The lack of health insurance for the 185,000 employed nonelderly Mississippians illustrates trends observed nationally in the workplace over the past decade. Most of the dramatic rise in the number of uninsured between 1982 and 1985 occurred among workers.<sup>1</sup> One of the reasons cited is the redistribution of employment to jobs that do not offer benefits in small firms and low-coverage industries. As costs of health insurance have increased, employers have opted for cost containment through reduction in employee health benefits such as

increased deductibles and co-payments and exclusion of dependents (particularly in self-insured programs) leaving many workers and their families with little or no coverage. In Mississippi there were 142,000 children less than 18 years of age without health insurance coverage.

There was a direct relationship between income and being insured in families with income >74% FPL (see Figure 2). However, among the poor and near-poor this positive relationship was attenuated by the availability of publicly funded health insurance programs: almost three-quarters of Mississippi's poor whose income was <50% FPL were covered by Medicaid or Medicare. But large numbers of these poor (85,000) were without insurance in March 1988 due to restrictions in Medicaid eligibility requirements. Moreover, among the 308,000 Mississippians with incomes between 50 and 100% FPL, 129,000 were reported to be without health insurance. This lack of coverage is largely due to an inequity in the availability of public assistance programs benefitting poor nondisabled individuals less than 65 years of age, in comparison with the eligibility provided to the elderly or disabled. Compare the income thresholds for these two groups: the elderly or disabled currently are eligible at incomes <95% FPL, while those nondisabled individuals less than 65 years of age are only eligible with incomes <42% FPL (with the exception of a few limited eligibility categories for pregnant women and children). The consequences of this inequity are clearly shown in the CPS profile of the uninsured (see Table 1): none of Mississippi's elderly reported a lack of health insurance. National data show that less than 1% of the elderly are uninsured.<sup>3</sup>

These data underscore the urgent need to extend the more generous eligibility thresholds now available to the elderly and disabled to poor nondisabled individuals less than 65 years of age.

Finally, in reviewing insurance coverage for Mississippians living in families with incomes >199% FPL, the data show that 108,000 persons still lacked any kind of health insurance coverage.

The adverse consequence of reduced availability of health insurance coverage in the workplace and the inequities of public assistance program eligibility rules is to produce a substantial number of employees and their dependents whose health care is not subsidized by their employers, and individuals whose income and family structure do not fit into eligibility categories required for Medicaid. Such individuals must, therefore, rely on hospitals and physicians who are willing to provide uncompensated care. But medical providers and society pay the price for the lack of health care coverage



through the large cost of uncompensated care and the expensive consequences of delayed or no care.<sup>7</sup> Because of the health care needs of such large numbers of uninsured, reform in the health insurance industry (both private and public) is emerging as a priority at the state and federal levels.<sup>2,8,9</sup>

The data presented in this report show that Mississippi's uninsured are a diverse group of people. Therefore, solving the problem of the uninsured must be approached through a variety of mechanisms. As a national solution is sought, state policymakers can fill health care gaps in a piecemeal manner, using all currently available options. For example, a "medically needy" program to cover individuals with catastrophic health needs would add approximately 54,000 individuals to Mississippi's Medicaid program.<sup>10</sup> A second option would raise the age threshold for persons eligible for Medicaid through AFDC from 18 to 21 years of age ("Ribicoff children"). Figures supplied by the Division of Medicaid show that 20,000 individuals could have health insurance through Medicaid with this option. A third option is to establish in state law the standard of need for AFDC (and therefore Medicaid) as a fixed percentage of the federal poverty level (FPL). In 1985, this level was increased from 33% FPL to 50% FPL. However, instead of specifying the new standard of need as a percent of the FPL, the Mississippi law utilized the dollar amounts. Thus, although the FPL has been adjusted upwards annually with inflation, the Mississippi standard of need has decreased relative to the FPL, down to the current level of 42% FPL. Gradually, persons who would have been eligible for AFDC (and Medicaid) have been denied access to the Medicaid program.

Whether Mississippi takes advantage of such options or not, the state will be required to enact phased-in coverage beginning July 1, 1991 for children 18 or younger in families with income <100% FPL (OBRA 1990). Figure 3 shows that an estimated 63,000 uninsured children would be covered by Medicaid under this mandate.

The number of medically indigent Mississippians who would gain Medicaid eligibility by the expansions discussed above is at least 137,000, still short of the 467,000 total uninsured as estimated by the March 1988 CPS. The large numbers of poor and nonpoor nonelderly adults and children who will not be covered by these expansions must be assisted through innovative health coverage programs in the schools, the workplace and publicly supported clinics.

Division of Medicaid  
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- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

#### Adverse Reactions: (percentage of patients)

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- Stevens-Johnson syndrome, toxic epidermal necrolysis,

and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

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In our immediate future, we must consider the next session of the Mississippi Legislature and those issues that are of importance to medicine. Some of the issues we will be interested in in 1991 are:

- Funding of a "hot line" to aid in providing medical care to the indigent.
- Restricting the use of tobacco.
- Providing incentives for practice in rural areas.
- Confining the practice of medicine to those individuals who have graduated from medical school.
- Placing of liability on third party payors who interfere with the appropriate practice of medicine.
- Placing a cap on non-economic damages when treating medically indigent patients.

Though many problems beset us, our future is not bleak. We should point with pride to the accomplishments of the medical profession and look forward to the next decade with enthusiasm. Most of us enjoy our work, we have good health and wonderful friends, and we live in the greatest country in the world. Let each of us pledge to put forth, during the next decade, a diligent effort to make this a better country in which to live. We face many problems but we also have many opportunities. Is your wine glass half empty or is its half full? Enter the coming decade as an optimist!

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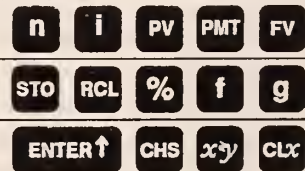
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# AMA Delegates Report

JAMES C. WAITES, MD  
Laurel, MS

At the time I am writing this, we have just returned from the 1990 AMA Interim Meeting held in Orlando, Florida. This was one of the busiest meetings ever. There were 435 delegates seated. We considered 194 resolutions and acted on 106 Board of Trustees and Council reports.

Upon returning home we were immediately caught up in the business of Christmas -- the gifts, the parties, the church programs with wise men, shepherds and music of the season. In reflecting on the meeting, it occurred to me that there were similarities in the holiday season and the meeting.

There were certainly many wise men and women in attendance. Room space and dining space were at a premium. People were discussing "gifts" of all sorts. We talked of the ethics of receiving gifts from pharmaceutical companies -- how they would impact on our prescribing practices, the appearance of impropriety and the cost of such gifts. We also talked of the unique gifts that each of us have and how we should use them not only for providing a livelihood, but for the comfort and suffering of others.

We also talked of unwanted "gifts" (if I may use that term loosely) being planned for us by others, that we can expect in the future. That is where "Gypsy" comes in. "Gypsy" is the acronym for Geographic Practice Cost Index. This gift is being planned for us by HCFA in their implementation of the Resource-Based Relative Value Scale. They propose that since it cost less to live and practice in Mississippi than in other locations in the country, we should be reimbursed less for the same work, time, training, etc. This has been strongly denounced by your AMA delegation, the MSMA, the Rural Health Coalition consisting of 33 states and by the AMA House of Delegates. In spite of all of our efforts and protest we seem destined to receive this "gift".

Another unwanted and onerous gift is "behavioral offsets". This particular gift from HCFA is based on

the presumption that since the reimbursement on certain services is going to be cut, we as physicians are surely going to increase our volume of these services to "offset" the cuts. Therefore, they will cut the reimbursement even more. This is to be done prospectively and assumes that we are not ethical and concerned with quality and cost.

"Anti-dumping", RBRVS, and fee modifiers are "gifts" that have already been given and are in various stages of implementation. We must become familiar with and understand the ramifications of these "gifts" if we expect to have peace on this earth.

I know I have sounded a very pessimistic note, but that is not my intention. I really wanted to stimulate your interest in these issues so that you will be better prepared to cope with the continuing myriad Medicare changes.

I agree with the analogy offered by Winston Churchill, who said "Democracy is the worst form of government, until it is compared to all other forms of government". Our American system of medicine, the free enterprise, fee-for-service system, has created, I believe, the best system of medical care in the world. It is not perfect, however. We have problems with rising cost, access, and insurance coverage, but working together we will solve these problems and further improve the system.

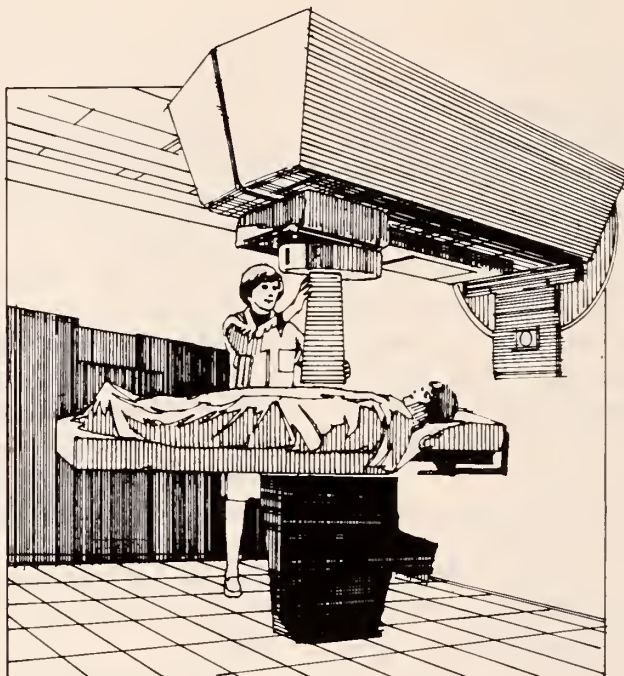
So let me wish each of you a Happy New Year, one that brings peace and health and happiness. Let me also admonish you to not "beware" but be aware of all these "gifts" and others yet to be come. Be informed; communicate with your AMA delegation, MSMA, each other and most important of all to your patients -- our greatest asset and allies.

Happy New Year -- Be aware of "Gypsies" and other "gifts".



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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **PHYSICIAN RECORDS**

### **Records of Physicians: Availability of Information to Other Physicians.**

The interest of the patient is paramount in the practice of medicine, and everything that can reasonably and lawfully be done to serve that interest must be done by all physicians who have served or are serving the patient. A physician who formerly treated a patient should not refuse for any reason to make his records of that patient promptly available on request to another physician presently treating the patient. Proper authorization for the use of records must be granted by the patient. Medical reports should not be withheld because of an unpaid bill for medical services.

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### **Records of Physicians: Information and Patients.**

Notes made in treating a patient are primarily for the physician's own use and constitute his personal property. However, on request of the patient a physician should provide a copy or summary of the record to the patient or to another physician, and attorney, or other person designated by the patient.

Several states have enacted statutes that authorize patient access to medical records. These statutes vary in scope and mechanism for permitting patients to review or copy medical records. Access to mental health records, particularly, may be limited by statute or regulation. A physician should become familiar with the applicable laws, rules or regulations on patient access to medical records.

The record is a confidential document involving the physician-patient relationship and should not be communicated to a third party without the patient's prior written consent, unless required by law or to protect the welfare of the individual or the community. Medical reports should not be withheld because of an unpaid bill for medical services. Simplified, routine insurance reimbursement forms should be prepared without charge, but a charge for complex, complicated or multiple reports may be made in confor-

mity with local custom.

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### **Records of Physicians on Retirement.**

A patient's records may be necessary to the patient in the future not only for medical care but also for employment, insurance, litigation, or other reason. When a physician retires or dies, patients should be notified and urged to find a new physician and should be informed that upon authorization records will be sent to the new physician. Records which may be of value to a patient and which are not forwarded to a new physician should be retained, either, by the physician himself, another physician, or such other person lawfully permitted to act as a custodian of the records.

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### **Sale of a Medical Practice**

A physician or the estate of a deceased physician may sell to another physician the elements which comprise his practice, such as furniture, fixtures, equipment, office leasehold and goodwill. In the sale of a medical practice, the purchaser is buying not only furniture and fixtures, but also goodwill, i.e., the opportunity to take over the patients of the seller.

The transfer of records of patients is subject, however, to the following:

1. All active patients should be notified that the physician (or his estate) is transferring the practice to another physician who will retain custody of their records and that at their written request, within a reasonable time as specified in the notice, the records or copies will be sent to any other physician of their choice. Rather than destroy the records of a deceased physician, it is better that they be transferred to a practicing physician who will retain them subject to requests from patients that they be sent to another physician.

2. A reasonable charge may be made for the cost of duplicating records.

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# Medical Organization

## 1990 Boswell Lecturer For Mississippi Thoracic Society Annual Session

Dr. Douglas Gracey, professor of medicine at The Mayo Medical School and Consultant in Thoracic Diseases and Internal Medicine at The Mayo Clinic in Rochester, Minnesota was the Boswell Lecturer for the 1990 Mississippi Thoracic Society Annual Session in December. The Boswell Lectureship was established in 1971 to honor the late Dr. Henry Boswell, first superintendent of the Mississippi State Sanatorium, who played a key role in reducing the number of deaths resulting from tuberculosis in Mississippi from more than 4,000 each year to less than 200 a year. The annual MTS meeting and the Boswell Lecture are sponsored by the Mississippi Lung Association, the Mississippi Thoracic Society, the University of Mississippi School of Medicine, Department of Pulmonary Medicine and the University Medical Center Division of Continuing Health Professional Education.



*Douglas Gracey, MD, second from left, Professor of Medicine at The Mayo Clinic, Rochester, Minnesota is pictured with Mississippi Thoracic Society officers from left: Keith Mansel, MD, Jackson, incoming president; Hugh Gamble, MD, Greenville, outgoing president; and Charles Parkman, MD, Hattiesburg, Mississippi Thoracic Society's Representative Councilor to the American Thoracic Society. Other officers not pictured include: John Studdard, MD, Jackson, vice president; and John Wallace, MD, Laurel, secretary/treasurer.*

## Dr. Corbett Named Chairman of the UMC Department of Neurology

Dr. James J. Corbett has been named professor of neurology and chairman of the Department of Neurology in the School of Medicine at the University of Mississippi Medical Center.

Dr. Norman C. Nelson, vice chancellor for health affairs and medical school dean, announced the appointment following approval by the Board of Trustees of State Institutions of Higher Learning.

"Dr. Corbett is a distinguished neurologist who brings excellent experience and credentials in academic medicine to the Medical Center," said Dr. Nelson. "We are pleased to have a physician of his caliber join us in this important role."

Dr. Corbett's Mississippi appointment was effective January 1, 1991.

Dr. Corbett, who had been professor of neurology and ophthalmology at the University of Iowa College of Medicine since 1985, is a 1962 graduate of Brown University. He earned his MD degree in 1966 at Chicago Medical School and took his internship and a year of internal medicine residency at the Rhode Island Hospital. He took a residency in neurology at Case Western Reserve University and during his residency, spent time as a neuro-ophthalmology trainee at the University of California with Dr. William F. Hoyt.

After serving in the United States Navy from 1971-1973, Dr. Corbett entered private practice in 1973 in Philadelphia, PA. and became a member of the clinical faculty at Jefferson Medical College and Wills Eye Hospital. In 1977, he joined the faculty at the University of Iowa College of Medicine as assistant professor of neurology and was promoted to associate professor of neurology and ophthalmology in 1980.

Dr. Corbett is a fellow of the American Neurologic Association and the American Academy of Neurology and secretary-treasurer of the North American Neuro-ophthalmology Society. He holds professional memberships in the Frank Walsh Society, International Perimetric Society, International Neuro-ophthalmology Society, American Academy of Clinical Neurophysiology and the American Association for the Study of Headache. The 1986 recipient of the "Alumnus of the Year Award" from the Chicago Medical School, he was inducted into Alpha Omega Alpha, medical honorary, in 1988.

Dr. Corbett is the author of 78 scientific papers, 18 abstracts and posters, and 16 book chapters and has lectured extensively throughout the U.S. and abroad.



## UMC Announces Faculty Appointments

Five have been appointed to the faculty of the School of Medicine at the University of Mississippi Medical Center for the current academic session.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs and medical school dean, announced the appointments following approval by the Board of Trustees of State Institutions of Higher Learning. Appointed were Dr. Sudhakar Madakasira, professor of psychiatry and human behavior; Dr. Verlin B. Hinsz, assistant professor of psychiatry and human behavior; Jenny A. Freedle, instructor in psychiatry and human behavior; Dr. William R. Boyte instructor in pediatrics; and Dr. Susan H. Taylor, instructor in surgery.

Dr. Madakasira earned the MBBS in 1974 at Sri Venkateswara University at Tirupati, India and took his internship and medical apprenticeship there at the SVRR Hospital. He took residencies in psychiatry and pathology at the University of Kansas Medical Center, where he was chief resident in psychiatry. In 1981, he was appointed assistant professor of psychiatry at East Carolina University and was promoted to associate professor in 1986. He joined the faculty at Wright State University in 1987, where he was associate professor of psychiatry and associate director of psychiatric education before coming to the Medical Center.

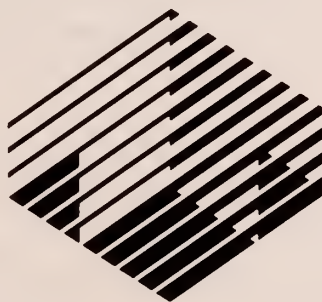
Dr. Hinsz earned the BS in 1978 at North Dakota State University, the AM in 1981 and the PhD in 1983 at the University of Illinois. He has been assistant professor of psychology at North Dakota State University in 1983. He also was a fellow and research associate in the U.S. Air Force Summer Faculty Research Program at the Human Resources Laboratory at Wright-Patterson AFB at Dayton Ohio from July-August, 1990.

Ms. Freedle earned the BS at the Mississippi University for Women and the MSW in 1980 at the University of Alabama. She was director of social services at Golden Triangle Regional Medical Center in Columbus in 1977, and entered private practice in adult, child and family therapy in 1983. From 1985-1988, she was a social worker in the Artificial Kidney Unit at UMC, and was named supervisor of social work and instructor in psychiatry and human behavior in 1988, and supervisor of the adolescent inpatient unit and instructor in the family therapy program in 1989. She had been the program director at Pine Grove Hospital in Hattiesburg since 1989.

Dr. Boyte earned the BS in 1983 at Mississippi College and the MD in 1987 at the Medical Center,

where he took his internship and residency in pediatrics.

Dr. Taylor earned the BS in 1973 at Millsaps College and the MD in 1977 at the Medical Center, where she took her internship and residency and was chief resident in general surgery. She took a fellowship in plastic and reconstructive surgery at the University of Florida at Gainesville, and was in private practice in plastic and reconstructive surgery in Tupelo from 1985-1986. She has been on the medical staff of the Department of Veterans Affairs Medical Center in Jackson since 1987.



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## New Members

**Boyte, William Richard**, Jackson. Born Limestone, ME, April 24, 1961; MD University of Mississippi School of Medicine, Jackson, MS, 1987; pediatric residency, University Children's Hospital, Jackson, MS, 1987-90; elected by Central Medical Society.

**Millette, Terrence John**, Pascagoula. Born June 30, 1954; MD University of Mississippi School of Medicine, Jackson, MS, 1981; interned and neurology residency, University Medical Center, Jackson, MS, 1981-85; neuro-ophthalmology fellowship, Massachusetts General Hospital, Boston, MA 1985-86; elected by Singing River Medical Society.

**Newell, Roderick Gray**, Pascagoula. Born September 7, 1951; MD University of Oklahoma School of Medicine, Oklahoma City, OK 1984; interned and family medicine residency University Medical Center, Jackson, MS, 1984-87; elected by Singing River Medical Society.

**Richardson, Lloyd Douglas**, Jackson. Born Memphis, TN, August 30, 1947; MD University of Mississippi School of Medicine, Jackson, MS, 1973; interned one year University Medical Center, Jackson, MS; pathology residency University Medical Center,

Jackson, MS, 10-74 to 6-75 and Vanderbilt University Hospital, Nashville, TN, 1-76 - 7-77; elected by Central Medical Society.

**Simmons, Harold David**, Grenada. Born Jackson, TN, March 5, 1960; MD University of Mississippi School of Medicine, Jackson, MS, 1987; interned and pediatric residency University Medical Center, Jackson, MS, 1987-90; elected by North Central Medical Society.

**Weldon, Thomas Edward**, Greenwood. Born Jersey City, NJ, December 17, 1946; MD University of Medicine & Denistry of New Jersey Medical School, Newark, NJ, 1972; interned and urology residency, Case Western Reserve Medical Center, Cleveland, OH 1972-77; elected by Delta Medical Society.

**Whittle, Timothy Evans**, Pascagoula. Born Macon, GA, Decmeber 4, 1960; MD University of Mississippi School of Medicine, Jackson, MS, 1986; interned Chippenham Hospital, Richmond, VA, 1986-87; ob-gyn residency, University Medical Center, Jackson, MS, 1988-1990; elected by Singing River Medical Society.

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## Personals

**Paul M. Allen**, a gynecologist/obstetrician practicing in Pascagoula and Oceans Springs presented two papers to the membership of the American Urogynecologic Society, at its eleventh annual meeting in Florida.

**J. Russell Barnes**, a family practice physician in Vicksburg, has been named a Fellow of the American Academy of Family Physicians.

**Austin P. Boggan** of Decatur has been named a Fellow of the American Academy of Family Physicians.

**Dennis O. Bradburn** of Jackson presented a paper during the Annual Scientific Assembly of The Southern Medical Association entitled "A Case of Reversible Ischemic Neurologic Deficit After a Twenty-Pound Weight Loss While Consuming a Liquid Protein Diet".

**Richard G. Burris** of Monticello has been recertified as a diplomat of the American Board of Family Practice.

**Richard J. Cunningham** of Hattiesburg has moved his medical practice to the Collins Family Practice Clinic in Collins.

**Norman Ervin** of Columbia has been recertified as a diplomate of the American Board of Family Practice.

**Richard Field, Jr.**, director of the Field Clinic in Centerville, recently served as visiting clinical professor of surgery at the Mt. Sinai School of Medicine in New York. He spoke on "New Methods of Hernia Repair" and "Problems in Rural Surgery".

**Hugh A. Gamble, II**, of Greenville has been appointed by Governor Ray Mabus as a member of the Emergency Medical Services Advisory Council, representing the Trauma Committee of the American College of Surgeons, to serve a four year term ending June 30, 1994.

**William H. Henderson** of Oxford has recently been selected as Secretary-Treasurer Elect of the Southern Gynecological and Obstetrical Society.

*"A Sign of the Times!"*



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**Benton Hilbun** of Tupelo was recently elected Chairman of Mississippi State Board of Health for the year 1990-91.

**Jack G. Hudson** of Hattiesburg was recently recertified in family medicine by the American Academy of Family Physicians.

**Word Johnston** of Mt. Olive has been recertified as a diplomate of the American Board of Family Practice.

**Robert P. Mathis** of Tupelo has become a Fellow of the American College of Surgeons.

**Lamar McMillin** of Vicksburg has been recertified as a diplomate of the American Board of Family Practice.

**Hugh C. Moore** was elected to a three year term on the Board of Trustees of Blood Systems, Inc., Scottsdale Arizona.

**J. Elmer Nix**, of Jackson gave the keynote address at a seminar on "Current Management of Low Back Pain"

held in Minneapolis, Minnesota. The seminar was sponsored by Abbott Northwestern Hospital. He also spoke to the Twin Cities Spine Society in Minneapolis on the topic "Federal Legislation Related to Spine Surgery".

**Robert R. Rester** of Jackson has associated with the Clinton Family Clinic, PA.

**Felix H. Savoie** of Jackson taught a course on arthroscopy of the upper extremity in Essen, Germany during November.

**Betty Hales Turner** of Kosciusko was recently elected to fellowship in the American Academy of Pediatrics.

**Robert B. Townes Jr.** of Grenada has been recertified as a diplomate of the American Board of Family Practice.

**Mathew B. Wesson** of Tupelo recently attended a meeting of the American Academy of Ophthalmology in Atlanta.

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All copy must be double spaced, including legends, footnotes, and references. Generous margins at the top, bottom, and on both sides of the page should be allowed. Each page after the title page should be consecutively numbered and carry a running head identifying the paper and author.

Titles should be short, specific, and clear. Ordinarily, a title should not exceed 80 characters, including punctuation.

**References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list.** Textbook, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the Index Medicus, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

Manuscripts accepted for publication are subject to copy editing. Authors will receive galley proof prior to publication. Galley proof is only for correction of errors, and text changes may not be made. The galley proof should be returned by the author within 48 hours from receipt, and no further changes made.

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In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Mississippi State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manu-



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## HEALTH INSURANCE

MSMA members who are organized as PAs and wish to provide health insurance coverage for their employees are eligible to participate in a self-insured 501(c) (9) trust sponsored and administered by a subsidiary of the association. All MSMA members are also eligible to apply for health insurance programs offered by the American Medical Association. For further information contact Jackye Wiebelt at MSMA Diversified Services, Inc.

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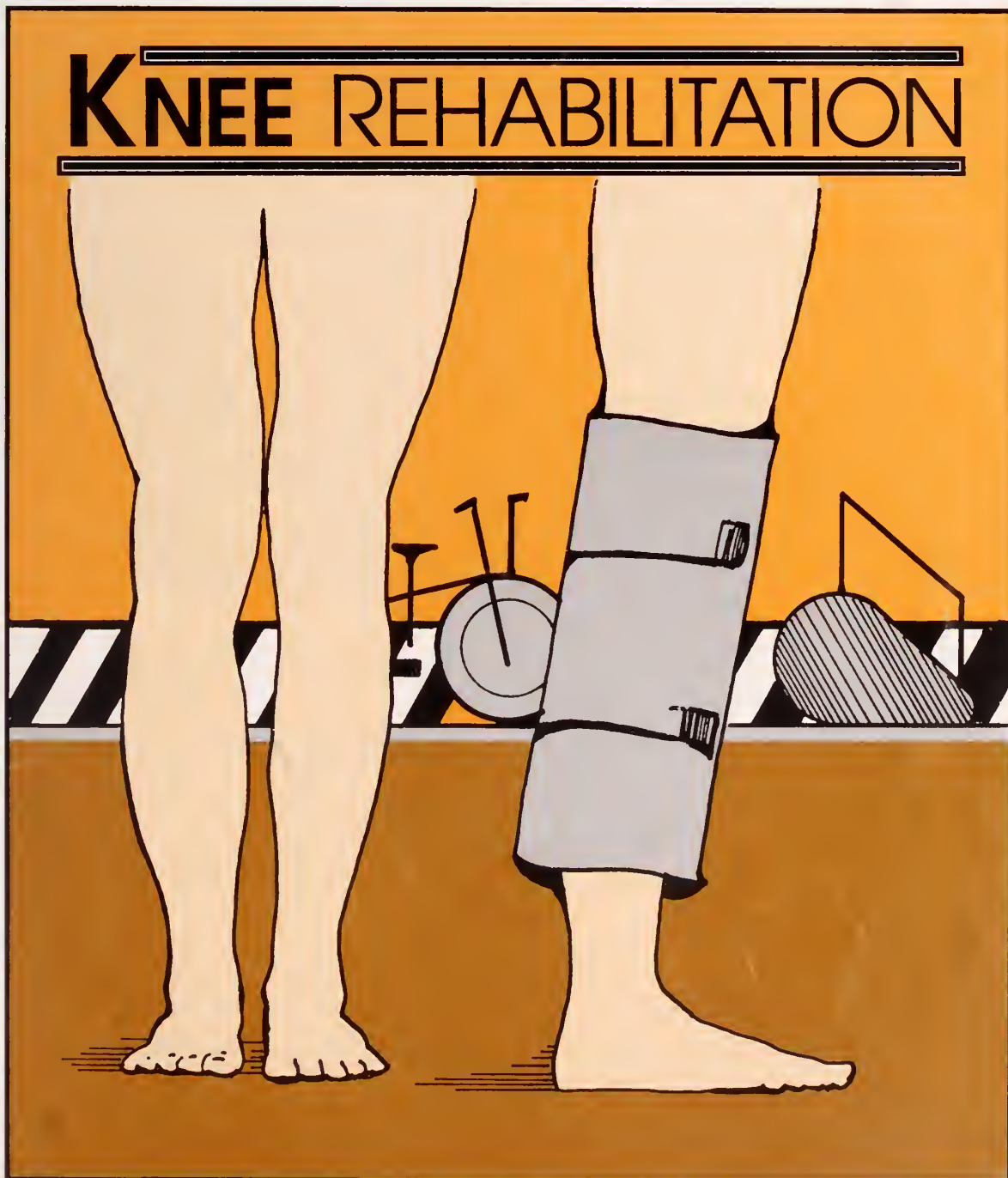
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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 2

February 1991

Dear Doctor:

The MSMA 123rd Annual Session will be held May 15-19 at the Royal d'Iberville Hotel in Biloxi. Physicians who want to reserve **Scientific Exhibit** space should write, Scientific Exhibits, MSMA, P.O. Box 5229, 39296-5229. The letter should include the following information: (1) the title of the exhibit; (2) the authors of the exhibit; (3) the amount of space needed for the exhibit; and (4) a brief synopsis of the subject to be exhibited.

MSMA is trying to determine how many of physicians are members of local school boards. If you are currently serving on the school board in your area, please call and let us know. Your support is needed for our continued efforts in comprehensive school health education.

The Delta Region AIDS Education and Training Center at LSU Medical Center, in conjunction with the University of Mississippi Medical Center, is providing a new service for health care professionals in Mississippi. Called the AIDS Helpline, it is a toll-free number (1-800-548-4659) for physicians, nurses, dentists, social workers, psychologists, infection control specialists, and health administrators to call to get the most up-to-date information available about HIV/AIDS. In addition to educational information, surveillance data, crisis numbers, information about experimental treatments, and customized literature searches, the service will provide clinical consultations on a call-back basis. Only a little more than a decade ago, AIDS was a little known disease. As such, it fell into the purview of the researchers and academic infectious diseases specialists. As the number of HIV/AIDS cases has soared, the need for current, accurate information has increased proportionally.

The AIDS Helpline was designed as a resource for all health care professionals to help all who are now treating HIV/AIDS patients. It is operated in conjunction with the AIDS Regional Education and Training Centers for Texas and Oklahoma.

The Delta Region AIDS Education and Training Center at LSU Medical Center is one of 15 regional AIDS training programs whose goals are to educate and motivate health care providers to counsel, diagnose, treat, and manage individuals with HIV infection and to assist in the prevention of high risk behaviors which may lead to infection. The Delta Region AIDS Education and Training Center serves Mississippi, Louisiana and Arkansas. The Delta ETC Resource Center Director in Mississippi is Dr. Stanley Chapman, Professor of Medicine and Director of the Division of Infectious Diseases at the University of Mississippi Medical Center, (601) 984-5560. The regional AIDS Education and Training Centers are funded by a grant from the Health Resources and Services Administration of the U.S. Department of Health and Human Services.



# Where there's smoke...there may be bronchitis



"Recent research has delineated early, more subtle changes in lung and immune functions. These alterations directly predispose smokers to respiratory tract infection."

*Am Fam Phys* 1987;36:133-140

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Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

#### Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

#### Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, serum-sickness-like reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials with an incidence in children in clinical trials of 0.055% to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis,

and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertension, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

#### Abnormalities in laboratory results of uncertain etiology.

- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.
- Abnormal urinalysis; elevations in BUN or serum creatinine.
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# Dateline

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 2

## State Births to Unwed, Teens Still Rank No. 1

Jackson, MS - Mississippi's rate of births to unwed and teen mothers - the highest among states in 1988 -- surged to new heights in 1989.

The state Department of Health reported this month that 39.4 percent of Mississippi's 43,026 births in 1989 were to unwed mothers and 21.5 percent were to teens. The Health Department found: 16,954 births to unwed mothers in 1989, up from 15,824 the year before.

There were 9,270 births in 1989 to mothers age 19 or younger. Of those 6,783 or 73 percent of the mothers were unmarried. In 1988, Mississippi led all states in the rate of such births, according to the National Center for Health Statistics in Hyattsville, Md.

Officials said there is no simple answer for why Mississippi has so many pregnancies among unmarried women and teenagers. According to a Health Department family planning coordinator, teens are given high priority at the state's health clinics. Birth control pills, family planning information and other services are made available upon request and without consent of parents.

## Mississippi Inmates Tested for Tuberculosis

Jackson, MS - Correction and health officials plan to test some 7,400 Mississippi inmates for tuberculosis. They're trying to find potential TB cases, treat infection, and control the spread of this serious and potentially fatal disease.

"Transmission of TB in the prison population presents a major potential public health threat," said Dr. Robert Hotchkiss, medical director, Mississippi State Department of Health TB Control Program. "Infected individuals leaving the correctional system return to virtually every community in the state."

Ken Jones, public information officer, Mississippi Department of Corrections, said the monthly turnover rate is about three or four percent.

Correctional institutions pose particularly high threats for TB infection: the latest screening at Parchman in February 1990 showed a 25 percent infection rate among those inmates.

Prison officials report four confirmed TB cases at Parchman and three other suspect cases undergoing further clinical study. Some 255 inmates are taking preventive therapy for TB infection.

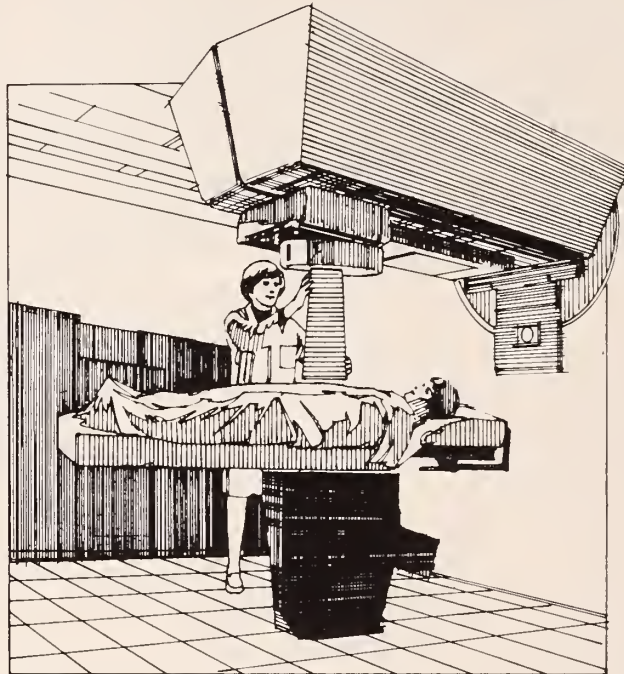
Comparatively, less than five percent of Mississippi's general population is TB-infected; three times as many inmates (16 percent) in county jails, the 16 community work centers, and the Central and South Mississippi Correctional Facilities are infected.

Without treatment, about five percent of newly infected individuals develop the active disease and become infectious to others within a year. Another five percent will develop active disease over the rest of their lifetime.



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# Post Prostatectomy Bladder Neck Contractures

JOHN P. ELLIOTT, Jr., MD  
JAMES O. GORDON, MD  
JOHN W. EVANS, MD  
LUCAS O. PLATT, MD  
WM. HUGHES MILAM, MD  
TUPELO, MISSISSIPPI

## **Review of the post-prostatectomy bladder neck contracture experience of a five-man urology group.**

We have subscribed to the theories of Dr. Lawrence Greene regarding the mechanism of formation of BNC and, in an effort to prevent excessive scarring, have refrained from vesical neck resection at the time of TURP.<sup>1-3</sup> In spite of this, BNC's seem to be inevitable sequelae of prostatectomy in an incidence that averaged 8% of the patients. (9% in those patients that had no preventive measures employed.)

The majority of patients with clinically significant post-prostatectomy BNC presented with a decreased stream (usually with a normal urinalysis). A significant alerting symptom was dysuria in the absence of pyuria. A TUI of post-prostatectomy BNC (at 4 and 8 o'clock) was done when we were unable to pass dilators or the cystoscope sheath through the bladder neck.

## **Methods**

Over four years (1983-1986), 1471 TURP's and 71 retropubic prostatectomies were done. During that period, 143 TUI's of symptomatic post-prostatectomy BNC's were done. Nineteen had prostatectomies at other institutions; 124 (8.0%) (116 TURP's, 8 retropubic prostatectomies) had previous prostatectomies

---

An 8% and 7% incidence of bladder neck contractures (BNC) requiring relief by transurethral incisions (TUI), (124) was found after review of 1471 TURP's and 71 retropubic prostatectomies. Prevention of BNC was attempted by leaving a one centimeter strip at the time of TURP (62), incising the bladder neck alone (42), or incising the bladder neck and interureteric ridge (65). Bladder neck obstruction occurred in 4.8% of the strips, 14% of the incised bladder necks only, and 3% of the incised bladder neck and contiguous interureteric ridges. A significant cost savings is possible.

---

at this institution. In 62 selected patients during four years (1983-1986), a small, less than 1 cm. strip of mucosa was left from the verumontanum to the bladder by physician #1 in an effort to prevent BNC. Physician #2, 3 and 4 did not change their method of doing TURP's. (The average BNC rate for those three physicians was 9%.) Physician #5 incised bladder necks with a Collins knife at 6 o'clock at the end of most, but not all small TURP's. He experienced a lower



percentage of BNC (3.0%) during the four-year period. Also, in view of a report in February 1987 of protection against BNC by TUI of the bladder neck at 6 o'clock, physician #1 changed from doing bladder neck strips to 6 o'clock bladder neck incisions on small prostates.<sup>4</sup> Forty-two patients were done. The bladder neck alone was incised. No incision was made into the interureteric ridge.

It was observed that many bladder necks are contiguous with the interureteric ridge and incision of the bladder neck alone leaves an elevated interureteric ridge in some patients. Therefore, in 1988 and 1989, 65 patients underwent 6 o'clock incisions of the bladder neck and the interureteric ridge (if the interureteric ridge was contiguous with the bladder neck) at the conclusion of TURP's.

## Results

There were four perioperative deaths (0.27%) among the 1471 TURP patients (2 emboli, 1 sepsis and renal failure, and 1 stroke). There were no operative deaths in the retropubic prostatectomy or TUI of bladder neck groups.

One hundred-forty-three BNC's were examined as to length of time to form (see Figure 1). Sixty-eight (48%) formed in the first 12 months.

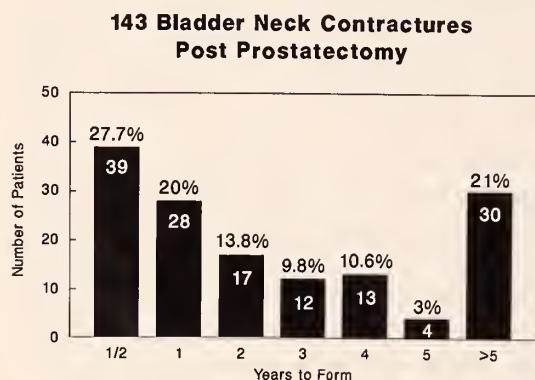


Figure 1: 143 bladder neck contractures post prostatectomy, analyzed according to the length of time between the TUR of the prostate and the transurethral incision of the bladder neck contracture.

One-hundred-sixteen BNC's (8%) had TURP's at this institution. Five BNC's (7%) had retropubic prostatectomies done at this institution (see Figure 2).

The TURP's that developed BNC's averaged 15.9 grams of tissue and retropubics averaged 83.4 grams.

The average length of time to form for TURP's was 25.5 months and for retropubics 27.3 months.

Analysis of Bladder Neck Contracture			
	BNC	Tissue Weight	Time to Form Average
TURP's 1,471	116 (8%)	15.9 gms	25 months
Retropubics 71	5 (7%)	83. gms	27 months

Figure 2: Analysis of bladder neck contracture post TURP and post retropubic prostatectomy.

The shortest time to form for a TURP was 1.6 months and the shortest time to form for a retropubic prostatectomy was 5 months. The longest time to form for a TURP was 13 years and for a retropubic prostatectomy, 6 years.

Thirty-six (30%) of the 143 post-prostatectomy BNC patients had a prior diagnosis of carcinoma (all BNC's were scar and none were regrowth of tissue that needed resection.) This compared to 333 (22%) carcinomas of the prostate diagnosed in 1471 TURP's. Many of the carcinoma of prostate patients had been irradiated. It appears that there is an increased incidence of BNC in carcinoma of the prostate, particularly post-irradiation.

Twelve (19%) of the 62 patients with 6 o'clock strips had carcinoma, compared to 22% of the 1471 TURP patients. The difference is not significant, and it appears that no carcinoma were missed by leaving the one centimeter mid-line mucosal strips in the prostatic urethra.

**Results of Mucosal Strips:** (see Figure 3) The mucosal strips did not present with any obstructing BNC's. Three of the patients (4.8%) presented with

Figure 3: Analysis of the results in patients where an attempt was made to prevent bladder neck contracture post TURP.

Results	
	Failed (Developed Bladder Neck Contracture)
Mucosal Strips (62)	3 (4.8%)
6 O'Clock Bladder Neck Incisions (42)	6 (14%)
6 O'Clock Bladder Neck and Interureteric Ridge Incisions (65)	2 (3%)



obstruction from the strip. This had occurred from contraction and shortening of the prostatic urethra, resulting in humping up of the strip and obstruction of the bladder neck. These three strips were resected.

**Results of Bladder Neck Incisions (Only):** By the end of 17 months, six (14%) had developed BNC and had to have TUI.

**Results of Bladder Neck and Interureteric Ridge Incisions:** Sixty-five patients were followed for an average of 15 months (range 8 to 22 months). Two patients (3.0%) required TUI of a BNC.

## Discussion

**Mucosal Strips:** It is of interest that the bladder neck not only contracts concentrically, but draws the bladder neck toward the fixed urogenital diaphragm. Correction of the process by TUI releases and lengthens the prostatic urethra. The three mucosal strips were no longer obstructing after the bladder neck was incised and released, but they were excised anyway.

It appears that BNC, rather than the natural sequelae of TURP in an incidence averaging 8% to 9% of patients, can indeed be markedly reduced. (A 3% incidence of BNC after 6 o'clock incisions was found after 15 months of observation when about 55% of those that will form should have been found; so the 10-year total should be in the 5-6% range, compared to 9% for the three physicians who did nothing to protect against BNC.) In order to accomplish this, the bladder neck and interureteric ridge (if contiguous) has to be incised at 6 o'clock post-TURP. It is not know if an incision in the bladder neck post-retropubic prostatectomy is protective, because the numbers were too small to draw a conclusion.

The cost of an average TUI of BNC on our short-stay surgery is \$2100 (\$1700, if done under local anesthesia) (see Figure 4).

*Figure 4: Analysis of the cost of transurethral incision of bladder neck contractures nationally.*

Cost of TUI of BNC Nationally
357,000 TURP's in U.S. (1983)
8% (BNC rate at NMMC) = 28,560 BNC's
\$2,000.00 (cost of TUI) = \$57,120,000.00 Expense of BNC in U.S.

In 1983, 357,000 TURP's were done in the United States. If 8% (28,560) of these had to have TUI's of BNC's at an average cost of \$2,000, then this represents a cost to the insurer of \$57,120,000. If this number could be reduced significantly by using prophylactic incisions of the bladder neck and the interureteric ridge post-prostatectomy, there would be a substantial savings.

605 Garfield Street (38801)

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# **Agressive Rehabilitation Protocol Following Anterior Cruciate Ligament Reconstruction (Bone-Patella-Bone)**

**GENE R. BARRETT, MD  
WAYNE P. JIMENEZ, MS, RPT  
J. MAX THOMAS, RPT  
JACKSON, MISSISSIPPI**

**R**ehabilitation of the postoperative knee following anterior cruciate ligament (ACL) injury has evolved and improved significantly over the past decade. In the early 1980s much consideration was made as to whether surgical intervention was needed or simply aggressive quadriceps and hamstring strengthening would be adequate to minimize instability. This was often dependent upon the degree of instability noted in the affected knee or the level of activity the patient decided to achieve post-injury. Various procedures such as McIntosh, iliotibial (IT) band or lateral reconstruction were performed attempting to provide a check rein to prevent the pivot shaft. These were and are often used in combination with intra-articular reconstructions. Used alone these procedures required prolonged immobilization and slow progression of rehabilitation. Intra-articular procedures include autogenous grafts (patellar tendon, semitendinous, gracilis, iliotibial band, et cetera), allografts, and synthetic materials.

The patients requiring surgery were put on a graduated exercise program to being rehabilitation phase. These programs, designed to maximize range of motion and strength, often varied depending upon the type of injury and surgery performed.

The following is an aggressive exercise protocol for patients rehabilitating from anterior cruciate ligament surgery. The protocol is a combination of several rehabilitation programs developed over the past

decade and is highlighted with emphasis into early extension of the knee and weight bearing (non-meniscal involvement). An early pilot study will be presented along with historical comparisons of patients with similar surgeries.

## **Literature Review:**

Several articles specifically addressing rehabilitation protocols have been published over the past decade. Paulos and Associates<sup>1</sup> discuss five phases of rehabilitation which initially included non-weight bearing of the affected limb with an immobilizer at 30 or 60 degrees. Early motion began within three to four weeks post-surgery. Increased weight bearing began at six weeks along with gradual exercises into flexion and extension. Noyes, et al<sup>2</sup> placed the patients postoperatively in continuous passive motion (CPM) to minimize stiffness postoperatively. A hinged knee splint was also utilized with limits from 0 to 90 degrees, and non-weight bearing status for six weeks. Passive extension from 0 to 30 degrees was also allowed. Steadman<sup>3</sup> and Blackburn<sup>4</sup> both limited motion within a cast hinged brace from 45 degrees to full flexion for the first six to eight weeks postoperatively and gradually progressed their motion on an as tolerated basis thereafter. Active leg lifts in all quadrants and weight bearing were begun on an as tolerated basis. Noyes<sup>5</sup> started more aggressive rehabilitation by placing



the patients in a cast hinged brace from 0 to 90 degrees (except meniscus, 20 to 90 degrees), and 25 percent weight bearing on an as tolerated basis postoperatively.

In most cases of the recent literature discussed, the patients were put in cast braces or splints postoperatively and were usually restricted to non-weight bearing status and/or limited range of motion for several weeks. This was conservatively done in order to protect the type of surgery performed. However, several problems arose from this conservative treatment such as quadriceps atrophy, knee extension lag, patellofemoral pain and dysfunction, and a slow functional return of the affected extremity. Also, in some cases some patients did not regain full motion and strength and/or had a residual limp postoperatively. The following protocol is based upon isometric placement of bone-patella tendon-bone autograft with Interference Screw Fixation. It is presented with particular emphasis on passive extension, quadriceps strengthening, and weight bearing to tolerance immediately postoperatively. The patients put in an extension splint are encouraged to work on passive extension, active flexion and progressive resistive exercise to minimize any muscle atrophy, particularly of the quadriceps and hamstrings. Weight bearing is begun immediately within the immobilizer except in the case of meniscal repair. All quadriceps exercises are performed in closed chain fashion or while avoiding 1 degree to 45 degree flexion. The exception to this rule is the isokenetic exercise in level 9.

#### Protocol:

##### 1. Preoperative instruction:

- a. Fit with straight leg immobilizer (see Figure 1).

*Figure 1: Example of straight leg immobilizer used in this paper.*

- b. Quadriceps sets and straight leg raises (SLR).
- c. Overview of postoperative rehabilitation and protocol.
2. Postoperative 3 to 5 days (in hospital).
  - a. Ice and straight immobilizer first 12 to 24 hours.
  - b. Continuous passive motion (CPM) machine progressing to minus 5 to 90 degrees as tolerated.
  - c. Passive extension range of motion (ROM).
  - d. Passive and active flexion range of motion.
  - e. Quadriceps sets at 0 extension only (add electrical stimulation if necessary).
  - f. Patellar motion.
  - g. Hamstring stretching.
  - h. Crutch training wearing immobilizer with weight bearing status set per physician (normally weight bearing as tolerated with isolated anterior cruciate ligament reconstruction).
3. Postoperative one week.
  - a. Add straight leg raises to quadriceps sets if patient can maintain 0 during lift (continue electrical stimulation if necessary).
  - b. Habitual range of motion.
  - c. Passive extension with foot elevated 6 to 8 inches (see Figure 2).



*Figure 2: One week postop extension following use of straight leg immobilizer.*



- d. Active and active assistive flexion.
- e. Quadriceps isometrics at 60 and 90 degrees.
- f. Standing double knee bends (unless non-weight bearing status).
- g. Active progressing to resistive hamstring exercise.
- h. Partial progressing to full range cycling as tolerated.
- i. Compression stocking.



- j. Ice, compression, and elevation (ICE) after exercise sessions.
4. Week Two.
  - a. Add leg press (high repetitions, low intensity).
  - b. Add rubber tubing resistive hamstring and hip flexor exercises.
  - c. Progress to full weight bearing in immobilizer and continue to sleep in immobilizer (varied weight bearing according to physician).
  - d. Noninvolved extremity, cardiovascular and general strengthening/flexibility exercises.
5. Week Three and Four (range of motion should be 0 to 25 degrees).
  - a. Discontinue 90 degree and 60 degree isometrics.
  - b. Maintenance range of motion unless deficit seen.
  - c. Off crutches (see Number 4, Section C).
  - d. Progressively discontinue immobilizer for safe ambulation as patient can control knee during stance phase of gait (no hyperextension, lack of extension, or giving way).
  - e. Continues to sleep in immobilizer as long as any extension lag exists, active or passive.
  - f. Progress to functional derotational brace or interim brace to prevent hyperextension, if necessary (depends on patient's activity level).
  - g. Add rubber tubing resistance to double knee bends and progress to single knee bends as tolerated.
  - h. Decrease repetitions and increase intensity on isotonic and isokinetic activity.
  - i. Begin 0 to 10 lbs. straight leg raises if patient can maintain 0 (can be part of cool down with ice, compression and elevation [ICE]).
6. Week Five and Six.
  - a. Begin stair climbing repetitions (machine or stair-well walking).
  - b. Tubing resistance to functional movements (forward and backward walking, side hopping and PNF patterns).
  - c. Increase intensity on cycle to include aerobic training, intervals and increased resistance.
  - d. Add lateral step-ups (could be added in week three or four).
  - e. Emphasize normal walking gait.
7. Week Seven and Eight.
  - a. Free weight squats.
    1. Shins as vertical as possible.
    2. No lower than thighs parallel to floor.
    3. Avoid hyperextension of knees.
    4. Two spotters.
    5. Good lumbar posture.
  - b. Lunges.
  - c. Gradual progression into stair running (walk down).
  - d. Bicycle.
  - e. Continue to reduce repetitions and/or increase intensity on isotonic, tubing and isokinetic activities.
  - f. Continue *closed chain* quadriceps strengthening only.
8. Week Nine and Ten.
 

Add strength sprints with slow start and slow stop, forwards and backwards only if muscle function is adequate.
9. Week Eleven and Twelve.
  - a. Continue to increase intensity of progressive resistive exercises.
  - b. Start high speed full range velocity spectrum and timed bouts of isokinetic knee extension, flexion exercises.
10. Month Four and Five.
  - a. Progress to normal jogging and sprints.
  - b. Continue increasing progressive resistive exercise (PRE) intensity.
  - c. Begin functional progressions, (i.e., agility drills, side stepping and cutting techniques).
  - d. Cybex test with functional test at end of month 5 or sooner if returning to normal activity (goals: 80 to 100 percent).
11. Month Five and Six.
  - a. Return to normal activity.
  - b. Emphasize continued progressive resistive exercises, protection and functional exercises for after one year.

## Results:

A pilot study was done to assess the effect of a straight leg immobilizer immediately postoperatively compared to the use of the conventional hinged knee support on all patients. 10 patients randomly selected were analyzed for range of motion during the first week of rehabilitation following anterior cruciate ligament (ACL) repair (patellar tendon fixation without meniscal repair). These patients were on a predetermined protocol which allows for early weight bearing to tolerance, range of motion and strengthening (quadriceps and hamstrings). These patients displayed an average of negative 3.8 to 100.5 postoperatively. A retrospective study was done on 10 randomly selected patients utilizing a hinged brace postoperatively. Measurements were recorded during the first week of knee rehabilitation. Results showed an average range of



motion in the knee of negative 8.7 to 99 degrees. Patients had nearly a 5 degree improvement during the first week of rehabilitation utilizing a straight leg immobilizer compared to a hinged brace. Also, no loss of flexion was noted in these patients. This is significant due to the fact that extension is usually most difficult to regain during the rehabilitation phase.

1325 East Fortification Street, 39202

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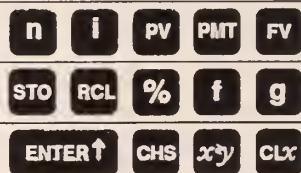
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# Forehead Tissue Expander

W. HOWARD KISNER, MD, FACS  
BATON ROUGE, LOUISIANA

**T**issue expansion using inflatable silastic implants has been utilized by reconstructive surgeons for the past seven years.<sup>1,2</sup> The goal is to expand appropriately selected tissue to a size suitable for flap transfer in order to reconstruct a specific defect. This can be done either by rapid intraoperative expansion<sup>3</sup>, or over a longer period of time.<sup>4,5</sup>

The range of use of these expanders has increased as surgeons have gained experience with the procedure.<sup>6</sup> The following case report illustrates the use of this technique on a patient who previously had a modified forehead flap, and has a low forehead hairline limiting the area of skin available for flap development.

## Case History

This patient had a recurrent multicentric basal cell carcinoma of the nose treated by radiation, and MOH's

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**The use of the forehead flap for nasal reconstruction has long been used by reconstructive surgeons. A case is presented in which comprised forehead skin is utilized following expansion by a tissue expander.**

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chemosurgery prior to referral for total nasal reconstruction (see Figure 1A-B). A series of local flaps was performed including a sliding rotation nasal flap which extended across the glabellar and into the central forehead. A bone graft was performed, however, she subsequently developed a small naso-cutaneous fistula with gradual resorption of the bone graft. Correction of the fistula would require development of mucosal lining, as well as flap replacement of the

*Figure 1-A: Pre-Operative View*



*Figure 1-B: Pre-Operative View*





scarred external nose.

Since the naso-labial and cheek flaps had been used in the initial reconstruction, the only tissue available for significant coverage was the forehead. However, this too was compromised not only by the midline surgical scar, but also by a short forehead skin with a low frontal hairline. (see Figure 2).

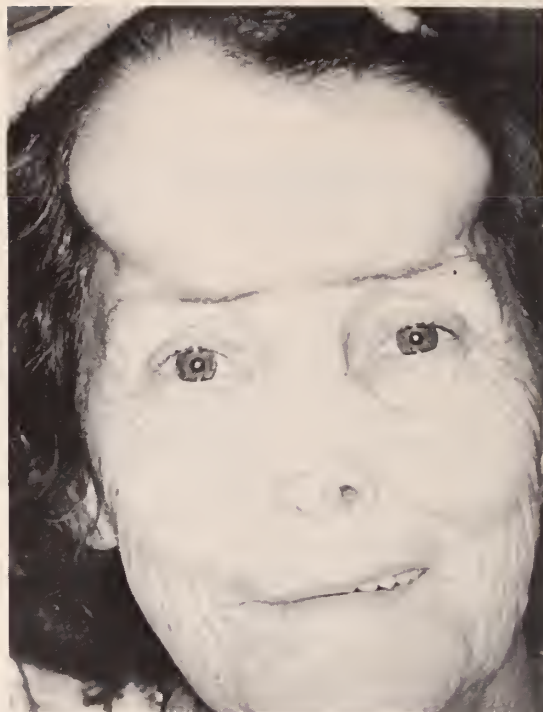


*Figure 2: Right Nasal Fistula With Scarring*

In order to have adequate forehead flap tissue, the skin would have to be expanded. Accordingly, a 400cc rectangle tissue expander was placed beneath the forehead skin and frontalis muscle in the subgaleal plan utilizing a coronal incision. The expander was filled with 50cc's of saline intraoperatively. Subsequently inflations began eighteen days post surgery with the injection of an additional 50cc's of saline. Another injection of 50cc's was injected, bringing the total to 150cc's. (see Figure 3) The patient noted significant discomfort with the last expansion, and, since it appeared that the forehead skin was adequately stretched, no more inflations were performed. An additional two weeks was allowed for skin softening prior to definitive flap transfer.

After removal of the tissue expander, the forehead flap was developed and transferred without difficulty. More than enough tissue was available for nasal coverage (see Figure 4).

Following detachment of the flap, there was ade-



*Figures 3-A: Expanded Forehead*

*Figure 3-B: Expanded Forehead*







Figure 4: Forehead Flap in Place

quate restoration of nasal coverage with no recurrence of the fistula (see Figure 5). The patient is now ready for additional reconstruction utilizing a cranial bone graft.

### Discussion

The forehead is a valuable site for tissue transfer in nasal reconstruction.<sup>7</sup> There must be adequate forehead skin available for utilization. Prior to the advent of tissue expansion, the use of narrow foreheads for flap tissue was extremely limiting. Using skin expansion techniques, narrow, scarred foreheads may be satisfactorily used for reconstruction donor sites. Not only does the tissue expander result in an increased area of available skin, but the process of slow expansion provides a built-in mechanism which results in better tissue viability during the period of flap transfer.

5233 Dijon Avenue, 70808

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Figure 5: Detachment of Forehead Flap

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# Mississippi State Board of Medical Licensure Annual Report July 1, 1989 - June 30, 1990

The Mississippi State Board of Medical Licensure is the State's legally constituted licensure Board for physicians (MD), osteopathic physicians (DO), and podiatrists (DPM). The Board, which meets bimonthly on the third Thursday beginning in January of each year is composed of nine physicians appointed to staggered terms by the Governor. The following is the current Board membership as of June 30, 1990: Charles R. Jenkins, MD, Laurel, Term: 7/1/84 - 6/30/90; Billy Wayne Long, MD, Jackson, Term: 7/1/89 - 6/30/94; Gilbert R. Mason, MD, Biloxi, Term: 7/1/84 - 6/30/90; John Purves McLaurin, MD, Oxford, Term: 1/25/90 - 6/30/94; Walter H. Rose, MD, Secretary, Indianola, Term: 7/1/84 - 6/30/90; 7/1/90 - 3/30/96; Matthew J. Page, MD, Greenville, Term: 7/1/86 - 6/30/92; T. Steve Parvin, MD, Starkville, Term: 7/1/88 - 6/30/92; Richard R. Riley, MD, Meridian, Term 7/1/88 - 6/30/92; W. W. Walley, MD, Waynesboro, Term: 7/1/88 - 6/30/94.

The Board is responsible for setting policies and professional standards regarding the practice of physicians (MD), osteopathic physicians (DO), and podiatrists (DPM); considering applications for licensure; conducting examinations for licensure; investigating legitimate drug traffic among medical practitioners under the Uniform Controlled Substances Act; conducting investigations in disciplinary matters involving violations of state and federal laws; probation, suspension and revocation of licenses; considering petitions for terminations of probationary and suspension periods and restoration of revoked licenses; promulgating reasonable rules and regulations neces-

sary to enable it to discharge its functions; and enforcing the provisions of the law regulating the practice of medicine.

The administrative functions of the Board are performed under the direction of its Executive Officer, Frank J. Morgan, Jr., MD, by eight full-time staff members, including three investigators; and administrative assistant; a licensing officer; an accountant, and a secretary. The office of the Board is located at 2688-D Insurance Center Drive, Jackson, MS 39216.

### Licensure

Any physician, osteopathic physician, or podiatrist desiring to practice medicine in Mississippi must first obtain a license to do so by contacting the Board. When an inquiry concerning licensure is received, a questionnaire to elicit certain pertinent information is sent to the practitioner. Based upon the information given by the practitioner, a determination is made as to the type of license for which he is eligible. Names of references submitted on questionnaire, as well as the American Medical, Osteopathic, or Podiatric Medical Associations, other states in which the practitioner has been licensed, and hospitals where the practitioner has held staff privileges are sent inquiries. If the information received is favorable, an application is sent to the physician.

### Reciprocity/Endorsement

The Board of Medical Licensure may grant licenses to practice medicine without examination as to learning, to graduates in medicine, osteopathic medicine, or podiatry who hold licenses to practice



from other states, provided the requirements in such states are equal to those set forth by this Board. In addition, this Board may affiliate with and recognize for the purpose of waiving examination, diplomates of the National Board of Medical Examiners, the National Board of Osteopathic Medical Examiners and the National Board of Podiatry Examiners in granting licenses to practice in Mississippi.

During FY 90, 733 practitioners requested applications for licensure by reciprocity with other states or through endorsement of the examinations given by the national Board of Medical, Osteopathic, and Podiatric Examiners. Based upon these requests, 412 applications were processed and approximately 6,592 reference inquiries were made by the Office of Medical Licensure to determine the eligibility of applicants for a license to practice in Mississippi.

Following receipt of favorable certificates of training and personal interview, a total of 265 physicians, 12 osteopathic physicians and 4 podiatrists were licensed in Mississippi.

In addition, 21 temporary medical licenses which allowed applicants 30 days in which to complete the necessary requirements for permanent licensure were issued.

Effective July 1, 1982, an amendment to the Medical Practice Act permitted the issuance of temporary licenses to non-resident and retired resident physicians to practice for up to 90 days in licensed youth camps in Mississippi. Seven (7) such licenses were issued during FY 90.

## Examination

The nationally administered Federation Licensing Examination (FLEX) was adopted as the state's medical licensing examination in 1973. The three-day FLEX is a written objective-type, comprehensive examination which tests applicants in the basic sciences, clinical sciences and clinical competence. Component I is designed to evaluate measurable aspects of knowledge and understanding of basic and clinical science. Component II focuses on critical abilities and knowledge required for diagnosis and management of selected ambulatory and in-patient clinical problems representing a core of clinical situations frequently encountered by the physician licensed for the independent practice of medicine. A score of 75 is required on each component for passing. The FLEX is given in June and December of each year, and the dates are set by the FLEX Board of the Federation of State Medical Boards of the United States, of which this Board is a member.

Applicants for licensure by examination are screened in the same way as those seeking licensure by reciprocity. References are obtained and credentials are checked thoroughly. During FY 90, 95 applicants were declared eligible and took the examination. 89 passed both components. Those applicants who were successful will be granted licensure upon their submitting documentation of completion of one year of accredited postgraduate training.

Beginning in the Spring of 1988, SPEX (Special Purpose Examination) was offered as a quarterly administration: March, June, September and December. The June and December SPEX administrations are set to coincide with the last day of the respective three-day FLEX administration.

This one-day examination is administered to applicants who possess all the qualification for licensure by reciprocity/endorsement, with the exception of having successfully passed a written medical competency examination within a 10-year period prior to filing his/her application.

In FY 90, 7 candidates made application and took SPEX. All were successful.

The Office of Medical Licensure obtained documentation of completion of postgraduate training in behalf of 98 physicians who passed the June and December, 1988 and June, 1989 FLEX examination, and medical licenses were issued to them.

A total of 38 restricted temporary licenses were issued for the period July 1, 1989 through June 30, 1990, to applicants for licensure who entered their first year of post-graduate training at the University of Mississippi Medical Center, Jackson. The temporary licenses permitted them to practice only within the scope of their respective residency training programs at the University.

## Limited Institutional Licensure

In addition to licensure by examination and reciprocity, state law also provides for limited institutional licensure which is available only to graduates of foreign medical schools for their employment in state-supported institutions. It was the intent of the law to enable Mississippi institutions to utilize the services of qualified foreign medical graduates during the period necessary for them to meet the requirements for permanent licensure.

Based upon their presenting to the Office of Medical Licensure their original medical diplomas, documentation of certificates from the Educational Commission for Foreign Medical Graduates (ECFMG), Visa Qualifying Examination (VQE), or Foreign Medical



Graduate Examination in the Medical Sciences (FMGEMS), and favorable references, 11 applicants were issued limited institutional licenses to practice in state-supported institutions. In addition, 30 limited institutional licenses were renewed during this period.

Since limited institutional licensure was established in 1971, 360 such licenses have been issued. As of June 30, 1990, a total of 32 of the limited institutional licensees have met all requirements, including passing the FLEX and fulfilling the postgraduate training requirements, and have been issued permanent medical licenses in Mississippi.

With the passage of House Bill 2008 which became effective July 1, 1987, the Board was allowed, at its discretion, to grant waivers on limited institutional licenses. The Board granted 2-year waivers to 3 limited institutional licensees during FY 90.

On June 30, 1990 the charity hospitals were closed by Legislative Action affecting 35 limited institutional licensees.

### **Certification and Verification**

A practitioner originally licensed in Mississippi by examination who seeks licensure in another state through reciprocity must have his license in this State and the scores he obtained on the licensure examination certified by this Board to the reciprocating state. 549 such certifications were made by the Office of Medical Licensure during FY 90 and 210 letters of good standing were completed.

The Board also verified the licensure status of practitioners to health care providers, health insurance carriers, licensing boards of other states, and state and federal law enforcement and regulatory agencies. Approximately 10,276 verifications of licensure were made by this Board during FY 90.

### **Annual Renewal**

The license of every physician, osteopathic physician, and podiatrist licensed to practice in the state must be renewed annually. On or before May 1 of each year, an application for renewal of license is mailed to all practitioners licensed by this Board to practice in Mississippi. The application must be completed and returned to the Board along with the renewal fee by June 30.

Based upon information given on the renewal applications, as of July 1, 1989, there were 5,601 physicians licensed to practice medicine in Mississippi. Of this number, 3,515 resided and practiced in state and 2,086 resided out of state.

A total of 3,318 in-state physicians worked in the primary care specialties, which include family practice, general practice, internal medicine, pediatrics, and obstetrics and gynecology.

On May 1, 1990, 6,290 applications for license re-registration were mailed. As of June 30, 1990, 5,792 practitioners had renewed for the period July 1, 1990 through June 30, 1991. 3,591 practiced and resided in Mississippi and 2,201 resided out of state, but elected to maintain current licensure in Mississippi.

### **Investigations**

Under the direction of the Executive Officer, the Board's three investigators carried out the responsibilities of investigating alleged violations of the Medical Practice Act and the Mississippi Uniform Controlled Substances Act as it applies to medical practitioners. During the fiscal year the Board received 243 complaints regarding alleged violations from various sources including state and federal law enforcement officials, state and federal regulatory agencies, hospital administrators, local and state medical societies, medical licensing boards or other states, health professionals and lay individuals. A total of 105 practitioners or individuals were investigated by the Medical Board investigative staff. In conducting these investigations and inspections a total of 591 pharmacies were profiled throughout the State of Mississippi. Analysis of the 105 investigations revealed 78 practitioners were investigated for suspicious or excessive prescribing of controlled substances, 8 involved personal abuse of controlled substances, 2 investigations involved unprofessional conduct; 9 involved the illegal practice of medicine, 3 were due to violation of Consent Order, 2 involved sexual abuse, 2 involved mental illness and one was a follow-up compliance investigation. Additionally, 74 urine screens were collected and 3 audits of drugs handled by dispensing physicians were accomplished.

As a result of the investigations 12 practitioners voluntarily surrendered their privileges (DEA Certificate) authorizing them to handle controlled substances. Six of these surrenders involved physicians who were personally abusing controlled substances; and 6 involved physicians who were prescribing controlled substances to patients otherwise than in the course of legitimate professional practice.

### **Disciplinary Actions**

Additionally, investigations conducted by the Board resulted in 8 disciplinary hearings. Following consideration of these matters, 5 licenses were revoked, 1



license was suspended and 1 license by reciprocity was denied and 1 reinstatement was denied.

Petitions for removal of restrictions were considered on 8 medical licenses. Of these, the Board denied 5 and granted 3.

Three (3) physicians requested reinstatement of their medical licenses. Two (2) were denied and one (1) was referred back to Examining Committee. In other actions, the Board granted 1 license by reciprocity, denied 1 and ordered 3 to appear before the Board. One (1) Plan of Practice was approved; 2 orders of Prohibition were ratified and 3 licenses were voluntarily surrendered.

Ten (10) physicians had their controlled substances prescribing privileges partially restored and 6 physicians were denied permission to re-register with the Drug Enforcement Administration for prescribing privileges.

Entering into Consent Agreements with 21 physicians, the Board placed 4 medical licenses on probations; 8 licenses were suspended, with suspension stayed with probationary terms and conditions; restrictions were placed on 6 licenses; voluntary surrenders were accepted in 2 agreements; and 1 license was suspended indefinitely.



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**ACP**



# Nurse Practitioner Regulations in Mississippi

*Editor's note: In an attempt to answer questions that were raised following passage of a resolution in the 1990 Mississippi State Medical Association meeting concerning the role and standards of practice for nurse practitioners, Marcella McKay, executive director of the Mississippi Board of Nursing, was asked to prepare an article for the Journal of the Mississippi State Medical Association related to rules, regulations and standards of practice for nurse practitioners.*

**T**here are 450 registered nurse practitioners in a variety of categories currently certified to practice in Mississippi.

They are authorized to practice by state law and regulated through rules and regulations and standards which have been jointly promulgated by the Mississippi Board of Medical Licensure and the Mississippi Board of Nursing. Currently, both Boards have authorized nurse practitioners to function only in the following areas:

- Family Nurse Practitioners
- Family Planning Nurse Practitioners
- Pediatric Nurse Practitioners
- OB-GYN Nurse Practitioners
- Adult Nurse Practitioners
- Nurse Anesthetists
- Maternal-Fetal and Neonatal
- Nurse Midwifery

Although requirements vary slightly depending upon the specialty area, the rules and regulations for registered nurse practitioners generally delineate educational preparation, practice provisions and regulatory requirements.

Nurse practitioners are required to be licensed in Mississippi as registered nurses and nationally certi-

fied as nurse practitioners. National certification involves the meeting of specific educational standards as well as passage of a standardized national certification examination.

A nurse practitioner is required to submit to the Mississippi Board of Nursing for approval, a protocol which has been mutually agreed upon by the nurse practitioner, the supervising physician, and, if appropriate, the employing agency.

The protocol provides an overview of the nurse practitioner's practice, drugs to be prescribed/utilized, and circumstances for medical consultation. All these requirements are evaluated prior to initial certification and reviewed and updated biennially through a recertification process. All credentials are reviewed by professional staff at the Board of Nursing. The Board of Nursing has a full time nurse practice consultant, Marcia Rachel, Ph.D., R.N. Dr. Rachel received her BSN at Mississippi College, Master's in Nursing from the University of Southern Mississippi and Doctorate in Education from the University of Mississippi Prior to joining the Board of Nursing, Dr. Rachel was on faculty at the Mississippi College School of Nursing.

The Board of Nursing has responsibility for the certification process and formulating/implementing disciplinary action if any nurse practitioner violates the Nursing Practice Act and/or fails to comply with rules,



regulations or standards of practice. "Expanded roles and procedures for Nurses" are found in Mississippi Board of Nursing Rules and Regulations Chapter IV, a copy of which is included with this article.

Further information about the regulatory require-

ments and/or copies or rules, regulations and standards may be obtained by written request to Marcella McKay, RN, MS Board of Nursing, 239 N. Lamar Street Suite 401, Jackson, MS 39201.

**Mississippi Board of Nursing Rules and Regulations**  
**Chapter IV**  
**Expanded Roles and Procedures**  
**[73-15-5(2) and (3)]**

**1. Registered Nurses**

- 1.1 Prior to recognition allowing the individual to begin practice as a nurse practitioner, the following must be submitted to the Mississippi Board of Nursing in compliance with established procedures:
  - a. Evidence of current licensure;
  - b. Completed application;
  - c. Documentation of education program including official transcript;
  - d. Signed protocol;
  - e. Required fee;
  - f. Proof of national certification or proof of application for national certification examination.
- 1.2 Practicing without final board recognition will constitute a violation of Section 73-15-29(1).
- 1.3 The Mississippi Board of Nursing will:
  - a. Approve nurse practitioner education programs which have national accreditation by the appropriate accrediting group;
  - b. Evaluate non-nationally accredited education programs by the appropriate national association guidelines;
  - c. Consider NEW practitioner categories which meet certain pre-set criteria.
- 1.4 There shall be a committee known as the Mississippi Board of Nursing RN Expanded Role Committee consisting of at least one (1) nurse practitioner and at least one (1) licensed physician in each area of practice employment to:
  - a. Act as advisory and interpretive group to other health care providers;
  - b. Establish protocols and guidelines;
  - c. Review and evaluate protocols and practice.
- 1.5 Renewal and reinstatement of Board recognition. All Registered Nurses wishing to renew or reinstate recognition as a nurse practitioner should submit appropriate continuing education documentation and protocol as established within Standards of Practice.
- 1.6 Grounds for disciplinary action will include:
  - a. Any nurse working as a practitioner who cannot show evidence of qualifications in the specialty area;
  - b. Any practitioner who fails to adhere to the rules, regulations, and Standards of Practice approved by the Mississippi Board of Nursing and Mississippi Board of Medical Licensure;
  - c. Any facility, clinic, office, etc., which uses a nurse in the expanded role without first complying with rules, regulations, and Standards of Practice shall be in violation of Mississippi Code 1972, Annotated, Title 73, Chapter 15.
  - d. Any nurse practitioner, physician supervisor or employer of nurse practitioner(s) who does not report to the Mississippi Board of Nursing violations of rules, regulations, and Standards of Practice as approved for the specialty area shall be in violation of Mississippi Code 1972, Annotated, Title 73, Chapter 15;
  - e. Violations of Nurse Practice Act. Subsequent disciplinary action by the Mississippi Board of Nursing will be reported to the national credentialing associations. Revocation or suspension of state recognition as nurse practitioner may or may not effect the Registered Nurse license depending on circumstances.





## The President's Page

J. ELMER NIX, MD

### Middle East and Medical Ethics

The outbreak of war in the Middle East has caused me to reflect on the beginnings of our Code of Medical Ethics. What a contrast between Saddam Hussein and Hammurabi who reigned as King of Babylonia for about forty years during the 18th century B.C. President Saddam Hussein is lacking in both moral turpitude and wisdom whereas Hammurabi was a wise and able ruler who tried to bring order and justice to his kingdom of Babylon. Hammurabi's reign was known as the "Golden Age" of Hammurabi. He was responsible for the first written code of medical ethics as well as one of the first recorded legal codes. This was due, in some degree, to the earliest form of writing (cuneiform), which was developed by the Sumerians in Babylon and this form of writing served as the prototype for our current alphabet. Hammurabi's code of ethics and law were a compilation of the best Sumerian and Semitic laws and customs and they contained 282 laws. This first written code of medical ethics was conceived approximately four thousand years ago and it sets forth in considerable detail the nature of conduct demanded of the physician. What a tragedy for society that the present day Prime Minister of Iraq was not imbued with the strong ethical and legal principles of his predecessor, Hammurabi.

During the fifth century B.C., the Oath of Hippocrates was conceived during the period of Grecian greatness. The Oath of Hippocrates is simply a brief statement of principles and this statement has come down through history as a living statement of ideals to be cherished by the physician.

The Hippocratic Oath protects the rights of the patient and appeals to the inner and higher instincts of the physician, though it does not impose any sanctions or penalties on the physician. During the 10th or 11th century, A.D., the Hippocratic Oath was Christianized to eliminate any reference to pagan gods. This oath has remained in Western civilization as an expression of ideal conduct for physicians.

Thomas Percival, an English physician, philosopher and writer, published his Code of Medical Ethics in 1803. In his code he described a "scheme of professional conduct relative to hospitals and other charities".

In 1847, at the first official meeting of the American Medical Association, the two principal items of business were:

1. Establishing a Code of Ethics, which was based on Percival's Code.
2. Creation of minimal requirements for medical education and training.

*(Continued on page 61)*



## Anybody Else Want A Piece of My Pie?

I have always thought: (1) that a doctor examined, diagnosed, prescribed, and treated patients; (2) that a nurse gave the prescribed medication to the patient, took care of the patient, kept records for the care of the patient; and (3) that the pharmacist filled the prescriptions, sold over-the-counter products and preparations, and generally helped the patient with compliance and similar problems that came up.

Things are not so simple anymore though. The nurse practitioners now have their own patients, prescribe and treat, and do about what doctors do. Nurse midwives are taking over the delivering of babies that we should be doing. Physician assistants much like nurse practitioners, have vague and often remote guidelines that, in essence, allow them to practice medicine without a medical license, which is required by state law.

As if that is not enough, we have podiatrists, chiropractors, naturopathic healers, faith healers, clinical psychologists, acupuncturists, and assorted others all wanting a piece of our pie. The new kid on the block is the clinical pharmacist. With him around, all we have to do is examine and diagnose, and he does all the prescribing as supposedly he knows more about medications than we stupid doctors, as it infers.

I don't know how much further the practice of medicine can be divided, but I get the feeling that the pie is being divided up in so many pieces that no one benefits, especially not even the patients.

As long as we physicians don't stand up for our areas of expertise, we can expect the practice of medicine to be more and more divided. Call it "Turf Battle" or whatever you want, but the more credence you give to these quasi-physician endeavors, the more they will exploit it and insist on a greater share of the pie. We have condoned Optometry for years under the guise that there were not enough ophthalmologists around and now little by little we find that they are gaining on us, just as the chiropractors have done.

Shall we meekly stand by and turn medicine into a "provider" business as the government would like it to be, or do we stand our ground? The government has long proposed that any one of these people would be as good as another or just as acceptable in underserved areas. Many of them the government now pays for taking care of sick patients at a cheaper price. It is "Cost Effective" medicine to use the governments coined expression for cheap patient care. I don't like the trend and I don't think it is in the best interest of the public. Cheap medicine is poor quality medicine in my book.

Just like you, I have friends and relatives in some of these areas and I am certain that I will hear from them, but this is the way I feel about it ..... no apology given and none forthcoming.

Let us work toward strengthening our profession and weed out the inept and the unqualified. Thank God I am a physician and I sincerely hope that in years to come there will be some semblance of my pie left intact.

Joe Johnston, MD  
Associate Editor

## Presidents's Page

*(Continued from page 61)*

The language and concepts of Percival's 1847 code have remained the same throughout the years, though it has been necessary to revise it, to reflect changing times, and to maintain clarity.

The AMA Principles of Medical Ethics was last revised in 1980. A physician must recognize responsibility not only to his patients, but also to society, to other health professionals and to himself. The Principles of Medical Ethics are not laws, but rather they



are standards of conduct which define the essentials of honorable behavior for the physician.

I urge you to ponder the Principles of Medical Ethics as listed below;

1. A physician shall be dedicated to providing competent medical service with compassion and respect for human dignity.
2. A physician shall deal honestly with patients and colleagues and strive to expose those physicians who are deficient in character or competence, or who engage in fraud or deception.
3. A physician shall respect the law and also recognize a responsibility to seek changes in those regulations which are contrary to the best interests of the patient.
4. A physician shall respect the rights of patients, of colleagues, and of other health professionals, and shall safe guard patient confidences within the constraints of the law.
5. A physician shall continue to study, apply and advance scientific knowledge, make relevant information available to patients, colleagues, and the public, obtain consultations, and use the talents of other health professionals when indicated.
6. A physician shall, in the provision of appropriate patient care, except in emergencies, be free to choose whom to serve, with whom to associate, and the environment in which to provide medical services.
7. A physician shall recognize a responsibility to participate in activities contributing to an improved community.

Through the centuries human nature hasn't changed much in its fundamental impulses and desires. Within the medical ranks, we do have a few Husseins, but we have an overwhelming majority of Hammurabis. Let us all take pride in our noble profession.

---

## **Physicians Recognition Award**

Six MSMA members were named recipients of the AMA Physicians' Recognition Award in August and October 1990. This award is presented by the American Medical Association to Physicians who have voluntarily completed a minimum of 50 hours of continuing education within a one-year period. Physicians can receive the PRA certificate valid for one, two, or three years. For a one-year award, physicians report 50 hours of continuing medical education, including 20 hours of Category 1; for the two-year award, physicians report 100 hours CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1. These six individuals are presented below by medical society.

### **Central**

Bobby Lee Graham, MD  
Clifton Lamar Hester, MD

### **Delta**

Walter Cornelius Gough, MD

### **East Mississippi**

Robert Wylie Jarrett, MD

### **Singing River**

Jeff Allen Hodges, MD

### **West Mississippi**

Walter E. Johnston, MD





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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **Opinions of Fees and Charges**

### **Fee Splitting**

Payments by one physician to another solely for the referral of a patient is fee splitting and is improper both for the physician making the payment and the physician receiving the payment.

A physician may not accept payment of any kind, in any form, from any source, such as a pharmaceutical company or pharmacist, an optical company or the manufacturer of medical appliances and devices, for prescribing or referring a patient to said source for the purchase of drugs, glasses or appliances.

In each case, the payment violates the requirement to deal honestly with patients and colleagues. The patient relies upon the advice of the physician on matters or referral. All referrals and prescriptions must be based on the skill and quality of the physician to whom the patient has been referred or the quality and efficacy of the drug or product prescribed.

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### **Fee Splitting: Clinic or Laboratory Referrals**

Clinics or laboratories that compensate physicians based solely on the amount of work referred by the physician to the clinic or laboratory are engaged in fee splitting which is unethical.

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### **Fee Splitting: Drug or Device Prescription Rebates**

A physician may not accept any kind of payment or compensation from a drug company or device manufacturer for prescribing its products. The physician should keep the following considerations in mind:

1. A physician should only prescribe a drug or device based on his reasonable expectations of the effectiveness of the drug or device for the particular patient.
2. The quantity of the drug prescribed should be no greater than that which is reasonably required for the patient's condition.

### **Fee Splitting: Referrals to Health Care Facilities**

Clinics, laboratories, hospitals, or other health care facilities that compensate physicians based solely on the amount of work referred by the physician to the facility are engaged in fee splitting which is unethical.

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### **Fees: Group Practice**

The division of income among members of a group, practicing jointly or in a partnership may be determined by the members of the group and may be based on the value of the professional medical services performed by the member and his other services and contributions to the group.

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### **Insurance Form Completion Charges**

The attending physician should complete without charge the appropriate “simplified” insurance claim form as a part of his service to the patient to enable the patient to receive his benefits. A charge for more complex forms may be made in conformity with local custom.

---

### **Interest Charges and Finance Charges**

Although harsh or commercial collection practices are discouraged in the practice of medicine, a physician who has experienced problems with delinquent accounts may properly choose to request that payment be made at the time of treatment or add interest or other reasonable charges to delinquent accounts. The patient must be notified in advance of the interest or other reasonable finance or service charges by such means as the posting of a notice in the physician's waiting room, the distribution of leaflets describing the office billing practices and appropriate notations on the billing statement. The physician must comply with state and federal laws and regulations applicable to the imposition of



such charges. The Council on Ethical and Judicial Affairs encourages physicians who choose to add an interest or finance charge to accounts not paid within a reasonable time to make exceptions in hardship cases.

### Laboratory Bill

When it is not possible for the laboratory bill to be sent directly to the patient, the referring physician's bill to the patient should indicate that actual charges for laboratory services, including the name of the laboratory, as well as any separate charges for his own professional services.

### Surgical Assistant's Fee

Each physician engaged in the care of the patient is entitled to compensation commensurate with the value of the service he has personally rendered.

No physician should bill or be paid for service which he does not perform; mere referral does not constitute a professional service for which a professional charge should be made or for which a fee may be ethically paid or received.

When services are provided by more than one physician, each physician should submit his own bill to the patient and be compensated separately, if possible.

It is ethically permissible in certain circumstances, however, for a surgeon to engage other physicians to assist him in the performance of a surgical procedure and to pay a reasonable amount for such assistance, provided the nature of the financial arrangement is made known to the patient. This principle applies whether or not the assisting physician is the referring physician.

### Competition

Competition between and among physicians and other health care practitioners on the basis of competitive factors such as quality of services, skill, experience, miscellaneous conveniences offered to patients, credit terms, fees charged, etc., is not only ethical but is encouraged. Ethical medical practice thrives best under free market conditions when prospective patients have adequate information and opportunity to choose freely between and among competing physicians and alternate systems of medical care.

### Fees for Medical Services

A physician should not charge or collect an illegal or excessive fee. For example, an illegal fee occurs when

a physician accepts an assignment as full payment for services rendered to a Medicare patient and then bills the patient for an additional amount. A fee is excessive when after a review of the facts a person knowledgeable as to current charges made by physicians would be left with a definite and firm conviction that the fee is in excess of a reasonable fee. Factors to be considered as guides in determining the reasonableness of a fee include the following:

- A. the difficulty and/or uniqueness of the services performed and the time, skill and experience required;
- B. the fee customarily charged in the locality for similar physician services;
- C. the amount of the charges involved;
- D. the quality of performance;
- E. the nature and length of the professional relationship with the patient; and
- F. the experience, reputation and ability of the physician in performing the kind of services involved.

## Medical Organization



*Dr. Henry Tyler, right, president of the American Heart Association, Mississippi Affiliate and Dr. Bryan Barksdale, center, president-elect joined Governor Ray Mabus, seated, and Paul Breazeale, left, chairman of the board-elect for the American Heart Association, Mississippi Affiliate in proclaiming February as Heart Month in Mississippi. In the proclamation Governor Mabus noted that heart and blood vessel diseases, are the leading killers in Mississippi. Such diseases took the lives of more than 12,000 Mississippians in 1989.*



## Medical Organization



*Dr. Faser Triplett introduces speaker during MSMA Legislative Forum .*

## Dr. Triplett Chairs AMPAC Board

R. Faser Triplett, MD of Jackson has been elected chairman of the board of the American Medical Political Action Committee (AMPAC), a bipartisan political action committee established by the American Medical Association. Dr. Triplett has served on the Board of the American Medical Political Action Committee since 1985.

Dr. Triplett has been vice speaker, speaker and president of the Mississippi State Medical Association and a delegate to the American Medical Association. Dr. Triplett has also served as President and Chairman of the Board of the Medical Assurance Company of Mississippi.

He is one of the founders of the Mississippi Allergy Clinic where he has been in practice since 1966. Dr. Triplett is past president of the American College of Allergy and Immunology and is currently a fellow of the American Academy of Pediatrics and the American Academy of Allergy.



*Members of the MSMA House of Delegates review 1991 legislative proposals*



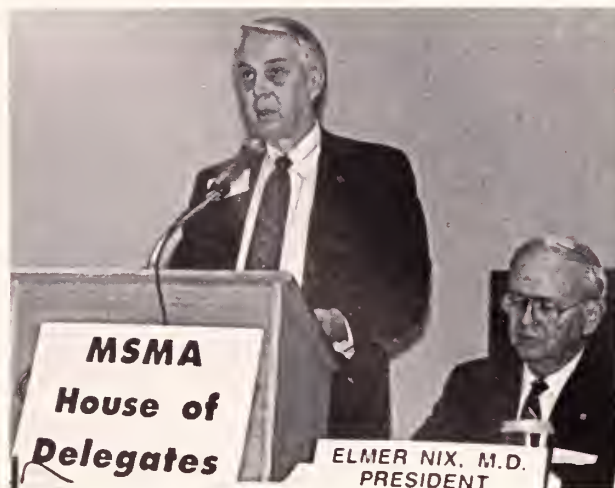
## Legislative Forum Held in Jackson

The MSMA, Mississippi Hospital Association, and the Association of Hospital Governing Boards cosponsored a Legislative Forum, January, 23 in Jackson. The day included a special session of the MSMA House of Delegates, a joint meeting of MSMA/MHA, and a reception for legislators.

Delegates heard an overview of MSMA's legislative package. Three of the five legislative proposals continue the association's efforts to "level the playing field" with third party payors. These three proposals are: (1) a bill that would make third party payors and utilization review entities liable for injuries to patients resulting from UR decisions involving unreasonable delay, reduction or denial of medically necessary services recommended by a physician; (2) a bill to require a health insurance company to provide written notice to the provider of services regarding the amount and nature of any benefit payment made directly to the insured; and (3) a bill that would require any health insurance company doing business in Mississippi to honor a valid assignment of benefits made by the insured to a provider of services. The two remaining bills in the association's 1991 legislative package are designed to address the problem of access to care for the economically disadvantaged and those Mississippians residing in underserved areas of our state which comprise an overwhelming majority of our counties. These two proposals are: (1) a bill that would limit total damages arising out of a medical liability suit involving services provided to a Medicaid or charity patient to \$200,000. This legislation was introduced last year but was not passed; and (2) a bill designed to provide increased incentives for primary care practice in underserved areas of the state by making the current state medical education loan program more attractive.

Guest speakers included Dr. James S. Todd, AMA Executive Vice President and AMA Vice President of Government affairs, Dr. John Zapp. Dr. Todd addressed the issue of the "Health Care Environment of the 90's", along with Dr. Carol M. McCarthy, president of the American Hospital Association. Dr. Zapp reviewed the "Health Issues Facing the 102nd Congress". Michael E. Dunn of Washington, DC led a seminar on "Constituent Political Skills".

The Legislative Forum concluded with a well attended reception for legislators.



*Dr. Eugene G. Wood, Jr., MSMA Council on Legislation chairman, reviewed 1991 Legislative proposal with the MSMA House of Delegates. Below, Dr. Bill Sistrunk of Jackson discusses some additional legislation.*



*Dr. Alton Cobb, right, greets AMA Executive Vice President Dr. James S. Todd, after his presentation to the Legislative Forum.*



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purchase order #

\* (Meets requirements of Mississippi Claim Form Laws — S.B. #2673, 1985 Regular Session, Mississippi Legislature).



## New Members

**Aldridge, Edward F.,** Brandon. Born Natchez, MS, June 29, 1949; M. D. University of Mississippi School of Medicine, Jackson, MS, 1981; interned and anesthesiology residency, Methodist Hospital, Dallas, TX, 1981-83; elected by Central Medical Society.

**Baker, Laurie M.,** Ashland. Born Jackson, TN, January 15, 1960; M. D. University of Tennessee College of Medicine, Memphis, TN, 1987; interned and family medicine residency University of Tennessee & St. Francis Hospital, Memphis, TN, 1987-1990; elected by North Mississippi Medical Society.

**Byrd, Lee Roy, III,** Jackson. Born Denton, TX, April 30, 1945; M. D. University of Texas Southwestern Medical School, Dallas, TX, 1970; interned and family practice residency, Parkland Memorial Hospital and Methodist Hospital, Dallas, TX, 1970-71 and 1975-77; elected by Central Medical Society.

**Dyess, Teri O.,** Meridian. Born Jefferson Parish, LA, February 23, 1961; M. D. University of Mississippi School of Medicine, Jackson, MS, 1987; interned and internal medicine residency Carney Hospital, Dorchester, MA, 1987-90; elected by East Mississippi Medical Society.

**Glover, W. Hughes,** Vicksburg. Born Winston Salem, NC, December 18, 1961; M. D. University of Mississippi School of Medicine, Jackson, MS, 1987; interned one year University of Alabama, Tuscaloosa, AL; internal medicine residency East Virginia Medical School, Norfolk, VA, 1988-90; elected by West Mississippi Medical Society.

**Houston, John Scott,** Clarksdale. Born Mississippi, January 22, 1953; M. D. University of Alabama School of Medicine, Tuscaloosa, AL, 1980; interned and urology residency University of Mississippi 1981-84 and Tulane University, New Orleans, LA, 1986-89; elected by Clarksdale & Six Counties Medical Society.

**Lyons, Barbara R Garretson,** Jackson. Born Mobile, AL, August 9, 1954; M. D. University of Mississippi School of Medicine, Jackson, MS, 1979; internal medicine residency University of Mississippi Medical Center, Jackson, MS, 1979-82; allergy & immunology residency National Jewish Center for Respiratory & Immunological Diseases, Denver, CO, 1982-84; elected by Central Medical Society.

**Stone, Lisa B.,** Jackson. Born Jackson, MS, January 16, 1961; M. D. University of Mississippi School of Medicine, Jackson, MS, 1987; interned and pediatrics residency University of Mississippi Medical Center, Jackson, MS, 1987-90; elected by Central Medical Society.

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## NEW MEMBERS/ Continued

**Williamson, Teresa Ann, Jackson.** Born Pascagoula, MS, September 9, 1960; M. D. University of Mississippi School of Medicine, Jackson, MS, 1987; interned and family practice residency, University of Mississippi Medical Center, Jackson, MS, 1987-90; elected by Central Medical Society.

**Woodard, James S., Columbus.** Born Reform, AL, November 21, 1954; M. D. University of Alabama School of Medicine, Tuscaloosa, AL, 1985; interned and internal medicine residency, Carraway Methodist Medical Center, Birmingham, AL, 1985-88; elected by Prairie Medical Society.

## REINSTATED

**Dohn, Donald F., Pascagoula, MS**

## Deaths

**Akers, John R., Meridian.** Born West Point, MS, December 8, 1943; M. D. University of Mississippi School of Medicine, Jackson, MS, 1968; interned and anesthesiology residency University of Mississippi Medical Center, Jackson, MS, 1968-71; died January 12, 1991, age 47.

**Bolton, Eldon L., Biloxi.** Born Biloxi, MS, January 11, 1910; M. D. Emory University School of Medicine, Atlanta, GA, 1932; interned one year Good Samaritan Hospital, Lexington, KY. 1932-33 and Crawford W. Long Hospital, Atlanta, GA, 1933-34; died December 25, 1990, age 80.

**Bostwick, Robert H., Jr., New Albany.** Born Hattiesburg, MS, April 10, 1909; M. D. Emory University School of Medicine, Atlanta, GA, 1934; interned one year Robert B. Green Memorial Hospital, San Antonio, TX; died October 22, 1990, age 81.

**Cross, John M., Charleston.** Born Paisley Scotland, January 27, 1928; M. D. University of Alberta Faculty of Medicine, Edmonton, Canada 1962; interned one year, Same; surgery residency, University of Saskatchewan, Saskatoon, Canada 1967-71; died December 31, 1990, age 62.

**Gordon, Alex, Jr., Morton.** Born Jackson, MS, July 31, 1916; M. D. University of Tennessee College of Medicine, Memphis, TN, 1942; one year internship Baptist Memorial Hospital, Memphis, TN, 1942-43; rotating residency Charleston West VA, 1947-48; died November 16, 1990, age 74.

**Henry, Joseph R., New Albany.** Born New Albany, MS, June 3, 1913; M. D. University of Tennessee College of Medicine, Memphis, TN, 1939; interned Grace Hospital, Detroit, MI, 1939-40; surgery residency, Brooke General Hospital, Ft. Sam Houston, TX, 1/47 - 12/49; died October 21, 1990, age 77.

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## Personals

**George E. Abraham II** of Vicksburg has been recertified as a diplomate of the American Board of Family Practice.

**Laurie Moling Baker** of Ashland has been named a diplomate of the American Board of Family Practice.

**Teri Dyess** of Meridian has associated with the Meridian Medical Associates, P.A. for the practice of internal medicine.

**Leslie E. England** of Natchez announces the relocation of his office to Medical Arts Building, Suite 4, 46 Seargent Prentiss Drive.

**W. E. Folse** of Collins announces his retirement from the practice of medicine.

**Wesley D. Granger** of Jackson has announced his association with **Indira K. Veerisetty** for the practice of Internal Medicine.

**John Scott Houston** announces the opening of the Practice of Urology in Clarksdale.

**Carl Kellum** of Tupelo has been elected to become a Fellow in the American College of Physicians.

**V. E. Landry** of Lucedale announces his re-election as chief of staff at George County Hospital.

**Michael W. Lowery** of Hattiesburg announces the relocation of his office to 1101-B South 28th Avenue Suite 1.

**John J. McGraw** of Laurel has been appointed 1991 chairman of the Advisory Committee on Young

Physicians for the Southern Medical Association.

**Daniel J. Peasley** of Laurel has joined the Internal Medical Clinic for the practice of gastroenterology.

**James W. Pressler** of McComb has been recertified as a diplomate of the American Board of Family

Practice and maintains a specialist status in family practice.

**Robert R. Rester** of Jackson has associated with the Clinton Family Clinic, PA for the practice of Family Medicine.

**Charles B. Romaine, Jr.** of Booneville has joined the staff of Magnolia Hospital.

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America's physicians are leading the way to reforming the health care system by speaking out on these critical issues. To get a copy of the *Health Access America* proposal, please call our Member Service Center at 1-800-AMA-3211.

The American Medical Association  
on behalf of member physicians and their patients.



A message from The American Medical Association for the Health Access America Proposal



## PERSONALS /Continued

**F. H. Savoie** of Jackson gave a presentation on arthroscopy of the wrist for the American Society of the Hand in Orlando, Florida.

**Glenda Scallorn** of Jackson was a guest speaker on separation anxiety sponsored by Charter Counseling Center and the Mississippi National Guard for spouses, family members, friends, and children of military personnel in Saudi Arabia.

**Hildon H. Sessums Jr.** of Vicksburg has been recertified as a diplomate of the American Board of Family Practice.

**Bernadette Sherman** of Natchez has been appointed Chief of Staff at Jefferson Davis Memorial Hospital.

**John G. Shields** announces the relocation of his office for the practice of Obstetrics/Gynecology to 740 Medical Center Drive, West Point.

**Jatinder Singh** of Waynesboro has been appointed as an affiliate faculty member of Advanced Cardiac Life Support by the Mississippi Chapter of the American Heart Association.

**Thomas Singley** of Pascagoula has been named the Pas-Point chapter of Ducks Unlimited's 1990 Sportsman of the Year.

**David N. Smithson** has been named the Medical Director of Cardiac Rehab at Biloxi Regional Medical Center.

**Francisco J. Sierra**, a cardiologist from Biloxi has joined the Ocean

Springs Hospital Medical Staff.

**Margaret Paxton Veller** of Natchez announces her retirement from the practice of Obstetrics and Gynecology.

**Thomas E. Weldon** has associated with the Greenwood Urology Clinic, P.A. for the practice of adult and pediatric urology.

**Timothy W. Whittle**, an obstetrician/gynecologist has joined the staff of Singing River Hospital.

**Willie Wells** of Bruce is serving as a preceptor for Jeff Parker, a third year medical student at the University of Mississippi Medical Center.

**Jeanette Zurawski** of Tupelo recently received board certification in the speciality of physical medicine and rehabilitation.

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# Meetings

## National and Regional

American Medical Association, Annual Meeting, June 23-27, 1991  
Chicago. James S. Todd, MD, Executive Vice President, 515 N.  
State St., Chicago, IL 60610

## State and Local

Mississippi State Medical Association, 123rd Annual Session, May  
15-19, 1991, Biloxi, Charles L. Mathews, Executive Director,  
735 Riverside Drive, PO Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July  
25-28, 1991, Gulf Shores, AL. Leontine Stevens, Executive  
Secretary, PO Box 1215 Ridgeland 39158.

Amite-Wilkerson Counties Medical Society, 3rd Monday, March,  
June, September, December, James S. Poole, Secy., The Gloster  
Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October,  
December, 6:30 p.m., Primos Northgate Restaurant, Jackson.  
Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson  
39202. Counties: Hinds, Leake, Madison, Rankin, Scott,  
Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00  
p.m., Claiborne County Hospital, Port Gibson, D.M. Segrest,  
Secy., PO Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday,  
April, and 1st Wednesday, November, 2:00 p.m., Clarksdale,  
Rodney Baine, Secy., PO Box 1364, Clarksdale, MS 38614.  
Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and Novem-  
ber. James E. Clarkson, Secy., PO Box 128, Biloxi 39533. Coun-  
ties: Hancock, Harrison.

Delta Medical Society, 2nd Wednesday, April and October. Walter  
H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties:  
Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSoto County Medical Society, 3rd Thursday, February and Aug-  
ust, 1:00 p.m., Kenny's Restaurant, Hernando, Malcolm D.  
Baxter, Jr., Secy., 124 W. Commerce St., Hernado 38632.  
County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April,  
June, October, December. Charles L. Wilkinson, Secy., Mail: Ms.  
Jenkins, PO Box 4053, Meridian 39305. Counties: Clarke,  
Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society. Meetings scheduled quarterly,  
David G. Hall, Secy., 150 Jeff Davis Blvd, Suite 130, Natchez  
39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March,  
June, September, January, P. Morris Parsons, PO Box 590,  
Ackerman 39735. Counties: Attala, Carroll, Choctaw, Granada,  
Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Tuesday, March, June,  
September, November, December. Tom E. Stanford, Secy., PO  
Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chicka-  
saw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo,  
Union.

North Mississippi Medical Society, 1st Thursday, April, September,  
December. Joe T. Harris, Secy., 2173 South Lamar Street, Oxford  
38655. Counties: Benton, Lafayette, Marshall, Panola, Tate,  
Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June,  
September, December. J. C. Griffing, Secy., Crosby Memorial  
Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September,  
December, Thomas F. Adams, Secy., 2104 5th Street North,

Columbus, MS 39701. Counties: Clay, Oktibbeha, Noxubee,  
Lowndes.

Singing River Medical Society, quarterly, December, March, June  
and September. Paul H. Moore, Jr., Secy., 719 Beach Blvd., Pas-  
cagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March,  
June, September, December. Julian T. Janes, Secy., PO Box 1910,  
McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln,  
Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June,  
September, December. A. J. Jackson, 415 South 28th Ave.,  
Hattiesburg 39401. Counties: Covington, Forrest, George,  
Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry,  
Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, May, Sep-  
tember, November, 6:30 p.m. Maxwell's Restaurant, Vicksburg.  
Robert C. Clingan, Secy., 1202 Mission Park Dr., Vicksburg  
39180. Counties: Issaquena, Sharkey, Warren.

## Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations  
have been accredited in accordance with the "Essentials of the Ac-  
creditation Council for Continuing Medical Education (ACCME)"  
and the Council on Medical Education of the MSMA. Information  
concerning CME programs for physicians offered by these accred-  
ited sources may be obtained by writing the Director, Continuing  
Medical Education, at the individual institution or organization.

Council on Scientific Assembly  
Mississippi State Medical Association  
735 Riverside Drive  
Jackson, MS 39202-1166

North Mississippi Medical Center  
830 Gloster Street  
Tupelo, MS 38801

Forrest General Hospital  
Mamie Street and Highway 49 South  
Hattiesburg, MS 39401

Mississippi Baptist Medical Center  
1225 N. State Street  
Jackson, MS 39202

Gulf Coast Community Hospital  
180 DeBuys Rd.  
Biloxi, MS 39531

Jefferson Davis Memorial Hospital  
Sergeant Prentiss Drive  
Natchez, MS 39120

King's Daughters Hospital  
Highway 51 North  
Brookhaven, MS 39601

Charter Hospital of Jackson  
Lakeland Drive  
Jackson, MS 39208

Biloxi Regional Medical Center  
150 Reynoir St.  
Biloxi, MS 39533

Jeff Anderson Regional Medical Center  
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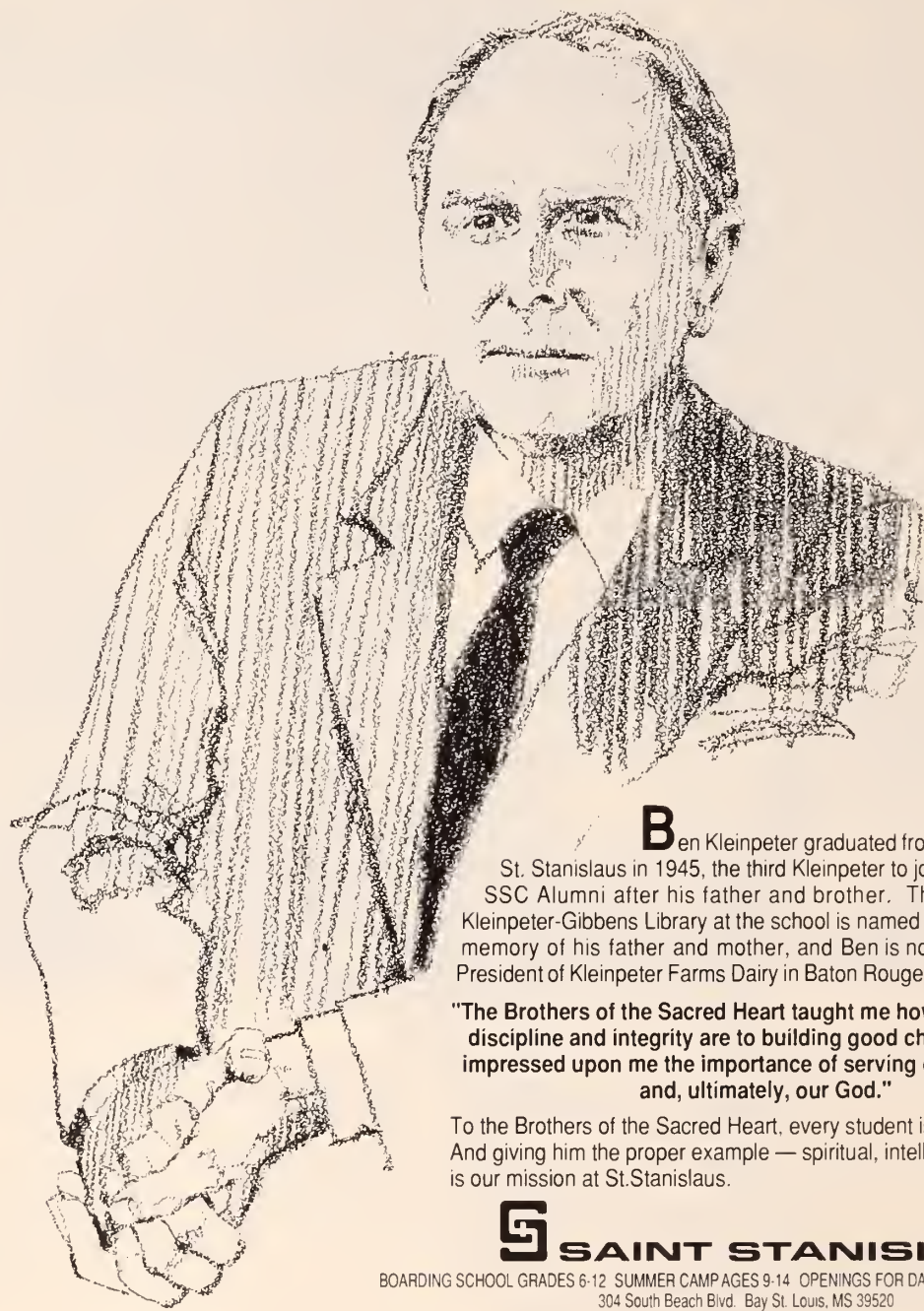
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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 3

March 1991

Dear Doctor:

MSMA and MSMAA will sponsor a teen health seminar entitled **Health Choice 91** April 5 on the campus of the University of Southern Mississippi. Twenty Mississippi junior and senior high schools participated in the Pilot Comprehensive Health Education Program during the fall semester of this school year. Each of these schools has been asked to select 5 students to participate in **Health Choice 91**. The pilot program teacher, school principal and superintendent for each class have also been invited. This one-day seminar will cover topics such as self esteem and goal setting, the pregnant teenager (both male and female responsibilities), substance abuse, steroids and physical fitness and STD's and AIDS. Each session has been designed to reinforce the positive health attitudes learned during the pilot program. Approximately 200 people are expected to attend. **Health Choice 91** is also going to be a participatory program, providing opportunities for students to participate in aerobic exercises programs, a health fair and small group discussions. Dr. Ginny M. Crawford, Director of the University Clinic at USM is serving as arrangements chairman for this seminar.

**Over eighty MSMA physicians have currently signed up to serve as a spokesperson for the health education curriculum before their local school district's board.**

Space is still available for Scientific Exhibits during the MSMA Annual Session May 15-19. Physicians who want to reserve **Scientific Exhibit** space should write: Scientific Exhibits, MSMA, P.O. Box 5229, 39296-5229. The letter should include the following information: (1) title of the exhibit; (2) the authors of the exhibit; (3) the amount of space needed for the exhibit; and (4) a brief synopsis of the subject to be exhibited.



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# Dateline

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 3

## **CAROTID ENDARTERECTOMY PROVES BENEFICIAL**

Jackson, MS -- The University of Mississippi Medical Center is one of 50 centers participating in the North American Symptomatic Carotid Endarterectomy Trial, NASCET. Departments of Neurology, Neurosurgery, and Surgery jointly contribute efforts to this study and others to determine the best treatment for carotid artery stenosis.

Recently released results at the 16th International Joint Conference on Stroke and Cerebral Circulation in San Francisco demonstrate that symptomatic patients with high grade stenosis (70%-99%) fare significantly better with operative treatment than those maintained on ASA and best medical management.

We encourage support for the remaining studies to help find the answers for asymptomatic stenosis (61%-99%) and symptomatic moderate grade stenosis (30%-69%). For more information contact Robin L. Brown, RN or Robert R. Smith, MD, University of Mississippi Medical Center, Department of Neurosurgery, 2500 North State Street, Jackson, MS 39216, (601-984-5700).

## **MARCH 30TH "NATIONAL DOCTOR'S DAY"**

Birmingham, AL - Among the first reservists called to action in "Operation Desert Storm" in Saudi Arabia were men and women of the medical community from cities across our nation. It is therefore most fitting that March 30, 1991, has been designated "National Doctor's Day," by a Proclamation signed by President Bush, following Joint Resolutions overwhelmingly adopted by the United States Senate and House of Representatives. This Proclamation enables the citizens of the United States to publicly show appreciation for the role of physicians "in caring for the sick, advancing medical knowledge, and promoting good health."





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# Adult Respiratory Distress Syndrome

FARID F. MUAKKASSA, MD

Jackson, Mississippi

## Etiology and Incidence

The Adult Respiratory Distress Syndrome (ARDS) is a term over twenty years old now. Yet, a specific definition of ARDS is still lacking due to its wide spectrum of presentation. This is evident by the many synonyms given to ARDS over the years.<sup>1</sup> Some are based on the etiology (shock lung, blast lung, traumatic wet lung, Da Nang lung), some are based on physiological features (noncardiogenic pulmonary edema, stiff lung syndrome, congestive atelectasis, capillary

leak syndrome) and some on medical treatment (post-cardiopulmonary bypass syndrome, respirator lung). Over fifty disorders have been associated with ARDS and some are listed in Table 1.<sup>2</sup> The incidence of ARDS varies depending on the number of organs injured. It could be as low as 2-5% in a trauma patient with single organ involvement or as high as 50% in a trauma patient with sepsis. It is clear now that the incidence of ARDS increases as the severity of insult or the number of organs injured increases. This has led to the current

TABLE 1: DISORDERS ASSOCIATED WITH ARDS

<b>Shock</b>	<b>Pneumonia</b>	<b>Drug reactions</b>
Septic	Viral	Amniotic fluid embolus
Hemorrhagic	Bacterial	High altitude exposure
<b>Trauma</b>	Miliary tuberculosis	Cardiopulmonary bypass
Pulmonary contusion	Legionnaires' pneumonia	Radiation therapy
Multiple major fractures	<i>Pneumocystis carinii</i>	Diabetic ketoacidosis
Fat embolism	<b>Disseminated intravascular</b>	<b>Thrombotic thrombocytopenic</b>
Multiorgan system failure	<b>coagulation</b>	purpura
Major burns	<b>Neurogenic</b>	Transfusion reactions
Severe head injury	Inhalation of toxins, (amonia, chlorine,	Air embolism
High transection of spinal cord	nitrous oxide, sulfuric acid,	Chemotherapy
Massive blood transfusion	phosgene, organophosphates)	Postpartum complications
<b>Fluid Aspiration</b>	<b>Smoke inhalation</b>	<b>Bowel infarction</b>
Gastic contents	<b>Pancreatitis</b>	<b>Sepsis</b>
Near-drowning	<b>Oxygen toxicity</b>	gram-negative rods (mostly)
Hydrocarbon fluids	<b>Drug intake, (heroin, methadone,</b>	gram-positive rods
<b>Postreexpansion of lungs</b>	aspirin, propoxyphene, ethechlorvynol,	Clostridia and others
	tricyclic antidepressants)	



thinking that ARDS is not a primary specific lung disease but rather it is part of multi-organ system failure. In the United States there are about 200,000 to 250,000 cases of ARDS annually with a mortality of 60-65% unchanged over the past twenty years.

## Diagnosis

Regardless of the different names for ARDS and the multitude of associated factors, some working diagnosis has to be established to permit proper and timely identification of this syndrome to allow early intervention and treatment. There are four major criteria for diagnosis of ARDS and these are based on clinical findings, physiologic findings, roentgenographic findings and pathologic findings.<sup>3</sup> Clinical findings should include a sudden catastrophic event that caused either direct or a non-direct pulmonary injury. Although one should exclude chronic pulmonary disease and congestive heart failure, this by no means imply that they cannot coexists with nor complicate the clinical picture of ARDS. Typically, the patient shows signs and symptoms of respiratory distress manifested by tachypnea with a respiratory rate of more than 20 per minute and labored breathing. Physiological findings should be consistent with a hypoxemia unresponsive to increased concentrations of inspired oxygen with a PaO<sub>2</sub> less than 50 mmHg while the patient is on an FiO<sub>2</sub> of 0.6 or more. Physiological findings also include a decreased lung compliance to less than 50 ml/cm (usually 20-30 ml/cm). The decrease in lung compliance indicates increased stiffness of the lung. This is manifested by high peak airway pressures once these patients are placed on mechanical ventilators. Other important physiologic diagnostic criteria are increased shunt fraction (QS/QT) and increased dead space ventilation (Vd/Vt). The roentgenographic criteria for diagnosis is the presence of diffuse pulmonary infiltrates in one or more lung fields, usually bilateral. The infiltrates are initially interstitial in pattern but later become alveolar. The appearance of the infiltrates lag behind the physiologic and clinical findings and their resolution comes after improvement of the physiologic and clinical findings. The last criteria for diagnosis of ARDS is pathologic findings which are mostly obtained at autopsy. The pathologic findings show heavy lungs (usually more than 1,000 g) with congestive atelectasis, hyaline membranes in alveoli and fibrosis.

## Pathogenesis

The pathogenesis of ARDS in trauma patients can be divided into two major categories. The first are

related to direct lung trauma such as pulmonary contusion, aspiration or inhalation injury, and the second are the trauma-related indirect injury such as sepsis and total body activation of the inflammatory mediators.

In direct lung trauma, like blunt trauma causing pulmonary contusion for example, the first event is a vascular endothelial and alveolar injury. This is followed by interstitial and alveolar hemorrhage and edema which results in collapse of airways. The initial alveolar collapse leads to microatelectasis and this further progresses to segmental atelectasis. As this process is developing, the clinical picture of ARDS will start showing within 24-72 hours after the initial insult. In aspiration and inhalation injuries the damage to the endothelial and alveolar surfaces are almost immediate and the clinical picture occurs soon after but the pathogenesis is similar to pulmonary contusion.

The role of inflammatory mediators in the development of ARDS is still unraveling. The complexity in this field is rapidly increasing as new mediators are discovered and their association with ARDS studied.<sup>4</sup> An outline of the inflammatory mediators thought to play a major role in the development of ARDS is listed in Table 2. These mediators do not act alone but mostly interact with each other to induce the development of ARDS. In the presence of the appropriate stimulus such as sepsis or shock, the complement system is

TABLE 2: INFLAMMATORY MEDIATORS INVOLVED IN THE PATHOGENESIS OF ARDS

<b>Complement (C3a, C5a, C3b, C5b)</b>
<b>Neutrophil derived lysosomal products</b>
Elastase
Collagenase
Cathepsins
Myeloperoxidase
Lysozyme
<b>Oxygen Radicals (O<sub>2</sub><sup>-</sup>, H<sub>2</sub>O<sub>2</sub>, OH<sup>-</sup>)</b>
<b>Platelet Activating Factor</b>
<b>Eicosanoids</b>
Cyclo-oxygenase Products
Endoperoxides (PGG <sub>2</sub> , PGH <sub>2</sub> )
Thromboxane A <sub>2</sub> and B <sub>2</sub>
Prostacyclin (PGI <sub>2</sub> )
Lipoxygenase Products
Leukotrienes (LTB <sub>4</sub> , LTC <sub>4</sub> , LTD <sub>4</sub> , LTE <sub>4</sub> )
Hydroxyperoxy Acids (HPETE)
<b>Monokines (IL-1, IL-6, Tumor Necrosis Factor)</b>
<b>Coagulation Factors (Thrombin, fibrin, fibrin degradation products)</b>
<b>Plasma Proteolytic Enzymes</b>
<b>Vasoactive Substances (Histamine, Serotonin)</b>



activated which could directly damage the alveolar membranes, or activate neutrophils. Neutrophils could directly damage alveolar surfaces or release potent mediators such as leukotrienes (formerly known as slow reacting substances of anaphylaxis) and thromboxanes derived from arachidonic acid. Leukotriene B<sub>4</sub> is a potent chemotactic agents that attracts more inflammatory cells to the site of injury while thromboxane A<sub>2</sub> is a potent pulmonary vasoconstrictor, bronchoconstrictor and platelet aggregator. Other released mediators like serotonin, bradykinin and histamine increase membrane permeability leading to increased extravascular lung water, the hallmark of noncardiogenic pulmonary edema characteristic of ARDS. The endothelial and epithelial damage together with flooding of alveoli with fluid and proteins (hyaline membranes) leads to surfactant abnormalities. Whether washout, decreased or impaired production and denaturation of surfactant is the final pathway in the pathogenesis of ARDS is still to be proven. But there is a lot of evidence to suggest a pivotal role of surfactant destruction in ARDS.<sup>5</sup> Surfactant abnormalities eventually leads to flooding of alveoli as the anti-edema effect of surfactant is lost. This in turn leads to more surfactant damage resulting in increased stiffness of the lung with subsequent changes in hydrostatic forces favoring more edema formation. Subsequently more alveoli are flooded and a vicious cycle is maintained.

## Management

The management of ARDS is currently supportive. Supportive therapy falls into three major groups. These are mechanical ventilation, fluid management and pharmacological interventions. Mechanical ventilation is the most important aspect of the supportive therapy as oxygenation is the primary goal. A volume cycled ventilator with a tidal volume set at 10-15 ml/kg is desirable as the lungs usually get stiff and pressure cycle ventilators may not be adequate to inflate the lungs. Positive end expiratory pressure (PEEP) is started at 5 cm of water and gradually increased while its effect on ABGs and cardiac output are closely monitored. Once the PEEP levels needed to maintain an arterial saturation of 90% and above approach 15 cm of water or above, monitoring with a Swan-Ganz catheter becomes almost mandatory. High levels of PEEP may decrease cardiac output and are associated with barotrauma. Despite the fact that high PEEP pressures may influence the pulmonary capillary wedge pressure, a Swan-Ganz catheter can help in measuring other parameters like cardiac output and calculation of oxygen

delivery and consumption thus aiding in the total management of the patient. Fluid management consists of correction of any hypovolemia with crystalloids preferably, and correction of anemia to achieve a hematocrit around 30% to enhance oxygen transport. Maintenance of tissue perfusion to heal injured tissues including the lung is a vital part of management of any critically ill patient. Direct pharmacological intervention in ARDS aimed at the specific lung injury is limited. Most of the pharmacological intervention is toward optimizing the cardiac output to maintain tissue perfusion by using cardiogenic agents, preload and afterload reducing agents. Antibiotic therapy should be used to treat any underlying infection, especially pneumonia. The goals of supportive therapy in ARDS is to achieve the lowest possible FiO<sub>2</sub>, PEEP and pulmonary artery wedge pressure possible to minimize further lung injury and to achieve the best PaO<sub>2</sub>, cardiac output and mixed venous oxygen saturation to enhance tissue perfusion.<sup>3</sup>

## Complications

Aggressive management of patients with ARDS is not risk free. Many complications do occur while treating ARDS. These may be due to the treatment itself or the associated injuries that caused ARDS in the first place. The therapeutic modalities needed to maintain life in these patients may contribute to further lung damage. Oxygen toxicity is one and should be avoided by maintaining the lowest FiO<sub>2</sub> possible. Oxygen toxicity is rare at FiO<sub>2</sub> below 0.5 but increases with time of exposure as concentrations of FiO<sub>2</sub> above 0.6 are maintained. Although PEEP is frequently cited as a cause of barotrauma in patients with ARDS, it is actually the high peak airway pressure that is the main factor behind the development of a pneumothorax. The high airway pressure contribute to pulmonary fibrosis and worsens gas exchange. Fibroblasts, though can tolerate harsh environmental conditions like high peak airway pressures, are not adapt for gas exchange like pneumocytes. The consequences of intubation like tracheal malacias, stenosis, ulcerations, and tracheoinnominate fistulas are not unique to patients with ARDS but are potential complications for all patients on prolonged mechanical ventilation. Gastrointestinal stress ulceration, renal failure, cardiac failure, liver failure and sepsis could complicate the course of patients with ARDS and lead to multi-systems organ failure and eventually death. Avoidance of these complications, especially sepsis, should be a goal in these patients.



## Future Therapeutic Alternatives

As supportive therapy has not changed the mortality of ARDS since it was first described, new trends in therapy are being investigated. Many of these new trends are aimed at mediator inhibition like the use of nonsteroidal anti-inflammatory agents<sup>6</sup> (ibuprofen, aspirin, indomethacin), or monoclonal antibodies to tumor necrosis factor, xanthine oxidase inhibitors, oxygen free radical scavengers (superoxide desmutase, catalase, mannitol) or thromboxane synthetase inhibitors<sup>7</sup>. Extracorporeal life support measures like membrane oxygenators are mainly used in infants who develop hyaline membrane disease, but its application in adults with ARDS is being investigated. Finally, a very promising modality of therapy currently undergoing prospective multicenter clinical investigation is the use of exogenous surfactant (EXOSURF<sup>®</sup>) in treatment of patients with ARDS. If the final pathway of pathogenesis of ARDS leads to the destruction of the surfactant, then it is reasonable that its replacement may alter the course of the disease and for the first time provide a therapeutic modality rather than supportive therapy. But until more data is available from these clinical studies, the mainstream of treatment of patients with ARDS remains supportive.

## Summary

The adult respiratory distress syndrome carries a mortality rate of 60-65% which has remained unchanged since its description more than 20 years ago. As our knowledge of the pathophysiology of ARDS improves, so does our ability to better define this disease entity. This is important since our therapy has been supportive with no change in outcome. The recent thinking is that ARDS is part of a multi-system disease process where there is activation of a total body inflammatory response. Identifying these inflammatory mediators and their role in the pathogenesis of ARDS may allow specific drugs to inhibit or modulate their release and action and hopefully alter the course of the disease. New therapeutic options, like exogenous surfactant, are emerging and undergoing clinical trials. Till a cure for ARDS is proven effective, prevention and support are our only current therapeutic options in battling ARDS.

2500 North State Street (39216)

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tress syndrome. *Emerg Med Clin North AM*. 7(2):419-430, May 1989.

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*Dr. Muakkassa is from the Department of Surgery, University of Mississippi Medical Center.*



# Trauma in Mississippi: Definition, Incidence, Etiology

GALEN V. POOLE, MD  
Jackson, Mississippi

Trauma can be defined as physical injury to a person which occurs as the result of an accident or is due to harmful intent. In order to define more accurately the causes of traumatic injuries the International Classification of Diseases, Ninth Revision, Clinical Modification<sup>1</sup> (ICD-9-CM) has divided the various causes of injury into specific categories which are designated by "E codes," for External cause of injury. These three-digit codes can be more precisely defined by a fourth digit after a decimal point, which denotes a specific person injured or provides greater detail regarding mechanism of injury. Table 1 provides a summary of E codes for accidental causes of injury. The E codes 850-879 are not included in traumatic injuries because they deal with poisonings or medical and surgical misadventures, injuries which are not of the same nature as traumatic wounds.

As an example of the specificity with which the cause of injury can be defined by E codes, the code for a motor vehicle traffic accident involving a collision with another vehicle is E 813. If the driver is the person

injured, the code is E 813.0, while an injured passenger is denoted by the code E 813.1. Pedestrians, motorcyclists, and other persons injured in motor vehicle collisions have a particular fourth digit as well. Similar E codes are available to define the type of accident, and person injured, for accidents involving bicycles, persons riding animals, watercraft, aircraft, and so forth.

Intentional injuries (Table 2) also are defined by specific E codes. Assault by handgun (E 965.0) can be distinguished from assault by shotgun (E 965.1) or even assault by a letter bomb (E 965.7). The E codes 980-989 are used when it is unclear whether an injury occurred as the result of an accident or was due to deliberate harm. Only during periods of war are the E codes 990-999 used to define cause of injury.

TABLE 1: ACCIDENTAL INJURIES, E CODES

800-848:	transport accidents (railway, highway, water, air, space)
880-888:	falls
890-899:	burns
900-909:	accidents due to exposure, neglect, venomous bites, storms, earthquakes, natural events
910-915:	submersion, suffocation
916-928:	injuries due to miscellaneous accidents (falling objects, industrial/agricultural accidents, penetrating wounds, explosions, electrical and radiation injuries)

TABLE 2: INTENTIONAL INJURIES, E CODES

950-959:	suicide
960-969:	assault/homicide
970-979:	legal intervention
980-989:	injury, undetermined if accidental or intentional
990-999:	injury due to war operations

The importance of using E codes in describing injuries is to define the precise cause of traumatic wounds. By collecting such data, along with other information on injuries, epidemiologic factors associated with traumatic events can be more clearly delineated. This might make it possible to target areas where intervention is needed, or to focus preventive efforts on specific segments of the population.<sup>2,3</sup>

Mississippi is a rural state, with only 47% of the population living in urban areas. This compares with



the national average of nearly three-fourths of the population living in urban areas, or California, in which more than 90% of the people live within urban areas. Mississippi has a population density of 55.6 people per square mile, compared to 68.1 per square mile for the nation. The national average is diminished considerably by the large, sparsely-populated western states. In comparison, the District of Columbia has a population density of almost 10,000 per square mile, and New Jersey has more than 1,000 persons per square mile.<sup>4</sup>

In 1987 there were 1,509 accidental deaths in Mississippi, for a rate of 55.9 per 100,000 persons. This made accidents the fourth-leading cause of death in the state, following heart disease, malignant neoplasms and cerebrovascular disease. Homicide was the eighth most common cause of death (315 deaths; rate 11.6 per 100,000) and suicide (282 deaths; 10.4 per 100,000) was number ten. These rankings have remained very consistent for at least the last decade.<sup>5</sup> Most of the deaths due to the three leading causes occur in the elderly, while 50-75% of trauma deaths in Mississippi occurred in people from 15-44 years of age.<sup>5</sup> Consequently there are more years of life lost from trauma than from heart disease and cancer combined, and for every death due to trauma there are at least two permanent, major disabilities.<sup>6</sup> Trauma is a disease of the young. As can be seen in Table 3, accidents were the leading cause of death for all age groups in Mississippi from 1 to 44 years, and homicide was the fourth leading cause of death in the age groups 1-4 years and 25-44 years.<sup>5</sup> Even though there were only four deaths from

homicide in the age group 1-4, this was equal to the number of deaths from malignant neoplasms in this age group. Homicide was the second most common cause of death in the 15-24 age group, followed by suicides, which are another major cause of death in teenagers and young adults. These age groups are less likely to be covered by commercial insurance or by third party payers than other age groups, and consequently trauma care has been a financial burden on hospitals that care for a large proportion of injured patients.

Although 56 deaths per 100,000 population per year from accidents may seem to be an inconsequential number, this rate far exceeds the national average. In fact, in 1985 Mississippi had the third highest rate of accidental deaths in the United States.<sup>4</sup> The rate of accidental deaths has always been relatively high in the sparsely-populated western states such as Alaska, Wyoming, Montana and New Mexico. This may relate to the relatively long distances between towns and greater delays in transporting accident victims to hospitals. The reason for the high death rate from accidents in Mississippi is less clear. Although the state is rural in character, population centers are fairly well distributed and geographic access to emergency medical care should not be a major problem. Perhaps some of the problem relates to a relatively low use of seat belts. From 1985-1988 there were 332,196 motor vehicle accidents in Mississippi with 56,690 injuries. Only 17% of drivers and passengers were wearing restraint devices or had cars equipped with air bags, and the death rate was 3.2 times greater in accidents in which restraint devices were not used compared to accidents

TABLE 3: DEATHS BY AGE GROUPS IN MISSISSIPPI, 1987\*

Age Group	Total No. Deaths	Deaths (rank) due to specific causes		
		Accidents	Homicide	Suicide
1-4 years	104	50 (1)	4(4)	0
5-14	151	97 (1)	(unknown)	3(4)
15-24	533	322 (1)	58(2)	35(3)
25-44	1,651	432 (1)	178(4)	104(5)
45-64	4,769	231 (4)	(unknown)	(unknown)
65 and over	16,736	355 (unknown)	(unknown)	(unknown)

\*from Vital Statistics Mississippi 1987 (reference 5)



in which restraint devices were being used.<sup>7</sup>

Deaths from homicide also occur at a very high rate in Mississippi. For the past decade the rate has been about 12 deaths per 100,000 persons, putting Mississippi consistently in the top 10 states in the nation for rate of homicide deaths.<sup>4</sup> While the homicide rate in Mississippi has been fairly constant for the last ten years, homicide rates in other states have fallen, causing Mississippi to rank in the top five or six states for homicide death rates. Table 4 summarizes the number of deaths and race-specific rates for the leading causes of trauma deaths in Mississippi in 1987. The homicide rate for blacks is 4.5 times greater than for whites, with the vast majority occurring in young black males. There was a similar number of deaths from suicide, but conversely most of these occurred in white males. The high death rate from burns among blacks in Mississippi may be due to substandard housing with inadequate

try and includes items pertaining to pre-hospital care, emergency room care, diagnoses, operations, complications and hospital disposition. It also includes demographic data on each patient including E codes to define the cause of injury. Of the 524 trauma patients admitted during the first five months of 1990, 186 (35.4%) were injured in transport accidents, almost all of which were motor vehicle accidents. Males predominated two to one and there was a nearly equal proportion of blacks and whites. In 36% of admissions due to motor vehicle accidents the patient was legally intoxicated. It should be remembered that these were survivors of traffic accidents, and often they were not driving the vehicles that caused the accident. The incidence of alcohol involvement in fatal motor vehicle accidents is probably much higher. Fifty-five percent of patients admitted following motor vehicle accidents had no insurance coverage whatsoever. There were 67 admissions due to submersion, choking, industrial and agricultural accidents (E codes 910-928) and 85 admissions due to falls (E codes 880-889). In the latter group there was a predominance of elderly men and women with orthopedic injuries. Only 9 suicide-related admissions and 10 admissions due to burns occurred during this time, but most suicide attempts are managed in community hospitals, and most of the major burns in the state are taken to the Burn Center in Greenville. Of the 150 admissions due to assault or attempted homicide (28.6% of all trauma admissions), nearly 80% were black males, usually between 14 and 45 years of age, and 12% were black females. This disproportionate incidence of violent injuries in the black population is not unique to Mississippi but is typical of the rest of the country.<sup>8</sup> Fifty-seven percent of the assault victims were legally intoxicated at the time of admission, and at least 70% had been drinking. Reliable information on drug use is not available but a significant proportion of assault victims have tested positive for recent use of cocaine, marijuana, narcotics and other illicit drugs. Three-fourths of all victims of assault and attempted homicide admitted to University Hospital are uninsured.

Mississippi is not a crime-ridden state. The rates of most crimes against persons and property are much lower than the national average, and are far less than in "high crime" states (Table 5). Annual per capita income for law enforcement is only \$94, one-half the national average of \$181. This reflects to some extent lower income levels in Mississippi, but it is also a consequence of the relatively low crime rate in the state. Reasons for the high rate of homicide deaths are unclear, but are clearly related to the population make

TABLE 4 : LEADING CAUSES OF MISSISSIPPI TRAUMA DEATHS AND RACE-SPECIFIC RATES, 1987\*

Cause	Number of Deaths	Rate/100,000	
		White	Black
1. Motor Vehicle Accidents	804	31.2	26.7
2. Homicide	315	5.1	23.1
3. Suicide	282	14.0	3.9
4. Burns	136	2.0	10.4
5. Falls	99	4.3	2.5
6. Firearm Accidents	72	2.4	3.1
7. Drowning	65	1.5	4.0
* Reference 5, 1988			

heating systems in many areas of the state.

At the University of Mississippi Medical Center we have been collecting information on all trauma-related hospital admissions since January 1990. This information is incorporated into a computerized trauma regis-



TABLE 5: RATES/100,000 OF SELECTED CRIMES, U.S. AND MISSISSIPPI, 1985 \*

Crime	U.S. Rate	Mississippi Rate	Highest State
Rape	37.5	25.8	Michigan 67.4
Robbery	225	65	New York 514.0
Assault	346	172	Florida 605.0
Burglary	1,345	1,076	Florida 2,221.0
Larceny	3,010	1,845	Florida 4,373.0
Motor Vehicle Theft	508	150	California 906.0

\* Reference 4, 1988

up of the state. Although it is difficult to prove, it is possible that the high incidence of accidental and intentional deaths in Mississippi is related to other socioeconomic indices. For example, Mississippi has the highest proportion of teenage mothers in the country, the highest percentage of low birth weight infants, and second highest infant mortality in the nation, the lowest per capita income, and the third highest unemployment rate. I do not believe it would be unreasonable to suggest that poverty and lack of education help to propagate a high incidence of trauma and trauma-related deaths.

It would be self-defeating to conclude that the current situation cannot be corrected. We need to stop thinking of accidents as unavoidable, random events. Accidents are preventable occurrences and by identifying the epidemiologic forces behind accidents and other traumatic injuries, we may be able to enact preventive measures or intervene in some way to prevent the senseless slaughter of the young people of this state. There will be no simple solutions, nor are the solutions likely to be politically expedient. Money must be available for research in trauma care and trauma prevention and some mechanism of financial support should exist for the hospitals and physicians who are now caring for trauma patients without receiving adequate compensation. Trauma is a serious problem in Mississippi and it must be addressed by legislative action and by the health care community with an urgent priority.

2500 North State Street (39216)

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*Dr. Poole is associate professor of surgery, University of Mississippi Medical Center, Jackson.*

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# TRAUMA

ALTON B. COBB, MD, MPH  
Jackson, Mississippi

When one considers the impact of injury on our mortality and morbidity burden and the potential reductions of this burden through prevention and access to an effective trauma service system, it is difficult to understand why injury prevention and trauma care are not major goals for our nation and state.

Some of the reasons may be that public understanding is deficient; solutions will require area-wide, regional or statewide systems, and adequate financing is not available.

Public understanding and support are essential to gaining the county, city and state support which are necessary to address these issues.

Development of trauma systems will require that hospitals become participants in multi-hospital systems. This involves hospitals giving up some of their individual autonomy to one of participation in a regional or statewide network. Such change is extremely difficult for most hospital administrators and their boards to accept in our current environment of competitive marketing for hospitals. Also, few hospitals see themselves as part of a system.

Fear of "Halo Effect" --- hospital administrators' fear that trauma center designations will shift other patients to such centers --- is a perception that impedes change. Several studies have discounted such an effect from trauma center regionalization.

The experience of others who have developed trauma systems proves that we need and can only afford very few trauma centers --- the conceptual configurations of such systems are well described and available to us. To move into a positive attitude towards accepting the need and reality will require the will to change by the public and by policymakers in the health care industry and by public policymakers. Regionalized service systems have been slow in coming --- the technology associated with trauma care systems demands regionalization or hospital networks.

Development of a trauma system in Mississippi will require resources --- money. First, we need money

to build the infrastructure --- planning, communications, first responder, emergency triage, transfer and the equipping and staffing. In Mississippi, we can probably afford only one major tertiary center and a half dozen satellites.

First, we need a basic plan based on our best information from Mississippi and elsewhere.

Incidentally, the difficulty in obtaining local support for regionalized health care systems dictated by high technology, high costs, etc., is a serious concern for perinatal systems, cancer services, etc., as well as trauma care.

We need funds for the infrastructure support plus financing for the care rendered the individual patient. Trauma systems require initial and ongoing infrastructure support plus patient reimbursement. We can plan for several methods of infrastructure support.

We probably need a statewide authority to administer the system --- this could be the State Department of Health or it could be an independent agency or the University Medical Center. In recent years, our state legislature has been generally opposed to establishing new free-standing agencies. The operation --- day to day --- of the system should probably be at UMC, the tertiary center. Overall planning, policy accountability might be at the State Department of Health and operational control at the University Medical Center.

Another serious problem is payment to the system for care of the individual patient. Trauma victims have a tendency to not carry the best health insurance plans. I doubt if much can be done to provide state support for uncompensated trauma care except through our overall efforts to address indigent care for all. Our best buy is to continue to expand Medicaid up to the federal limits and pump more dollars into the system with the hope that this helps to strengthen the total system and thereby make all care more available and accessible. Some states



have included in their trauma programs some funds (1/3 or so) for coverage of victims without insurance. This problem will not be fully solvable from a global sense until we assure somehow that everyone has adequate coverage for health care.

In the meantime, several of the proposed federal programs for trauma services do include some portion of the funding earmarked for uncompensated care.

### Summary

The need for planning and development of state-wide trauma prevention and trauma service systems is or should be a high priority -- if one sets priorities on criteria that address important factors such as cost to benefits in reduction of life years lost and reduction of disability and costs of long-term rehab services, etc. Prevention of injury and first class trauma care will lessen our heavy human burdens (loss of life and disability) and reduce our long-term outlays for rehabilitation, etc.

Obviously our first line of intervention should be prevention -- all educational, regulatory and automatic protectors (seat belts, gun restrictions, air bags) that will lower injury rates.

A state trauma system must be planned for the larger universe than individual institutions or communities. We must educate our public that the only practical way to provide services for major trauma is through regionalized systems that they somehow must help support. The recent emphasis on making the health services industry a "competitive market" has discouraged public interest and support for regionalized health systems.

Our best chances for funding such systems are probably through user fees, sin taxes and surcharges on fines, etc.

We need the elements or principles of a plan and present it to the public and to their representatives in the courthouses, city halls and state capital of our state. We need to generate public discussion and understanding on the problem, the potential for saving lives and preventing disability.

To do any less would mean our failure to meet our duties as health professionals and public health officials.

P. O. Box 1700 (39215-1700)

*Dr. Cobb is State Health Officer, Mississippi Department of Health, Jackson.*

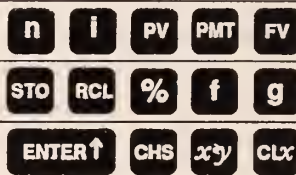
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# Trauma Care At The University Of Mississippi Medical Center: Economic & Other Realities

DAVID E. BUSSONE

Jackson, Mississippi

The issue of trauma care is problematic - not only at the University Hospital, but throughout the state, and in many areas of this country. A publication of Touche Ross, the TRIM Report, recently stated that: Statistics released by the national center for Trauma show that, since 1985, 60 trauma centers have ceased operations. In Los Angeles alone, 10 of 23 centers have closed. In many cases, the primary issue in determining a decision for closure was cost.

At the outset, it is important to note that the University Hospital has a significant statewide role in trauma care. That role is one which we wish not only to maintain, but to enhance. Trauma care is important to our teaching mission, and we fully realize the capabilities which we possess and are not available elsewhere in Mississippi.

The extent of the medical center's efforts can be evaluated by examining data for two diagnostic categories of trauma patients. The two categories include patients resulting from: (1) motor vehicle accidents (MVA), and (2) gun shot wounds or stabbing (GSW&S). On an average day during calendar year 1989, almost two (1.83) patients were admitted as inpatients because of these diagnoses. In addition, almost twenty (19.77) of these patients occupied beds throughout the hospital.

(The data noted above were secured from the medical record research system of the University Hospital. MVA patient data were derived from "E" codes 810-825 of the ICD9CM system, while GSW&S diagnoses resulted from codes 922, 955, 965, 966, 970 and 985. The term "combined" trauma, when used in this article, refers to the aggregate grouping of the patients.)

## Patient Origin

It is also a useful exercise to determine the residential origin of the trauma patients treated at the University Hospital. From October 1, 1989 through January 31, 1990, 187 combined trauma patients were admitted. Of these 31.3% resided in Hinds County; 6% came from out of state; slightly more than 16% originated from Leake, Rankin and Yazoo counties, and 43.3% resided in the remainder of Mississippi's seventy-eight counties.

Breaking this chart further into its two major trauma components, the origin of MVA patients during this period may be noted below:

- 25.5% - Hinds County
- 8.7% - Out of State
- 21.8% - Rankin, Leake and Yazoo
- 44.3% - Other Mississippi Counties  
(n = 120)

Gun shot wound and stabbing victims were distributed in the following manner:

- 42.4% - Hinds County
- 13.5% - Franklin, Madison and Sunflower
- 44.1% - Other Mississippi Counties  
(n = 67)

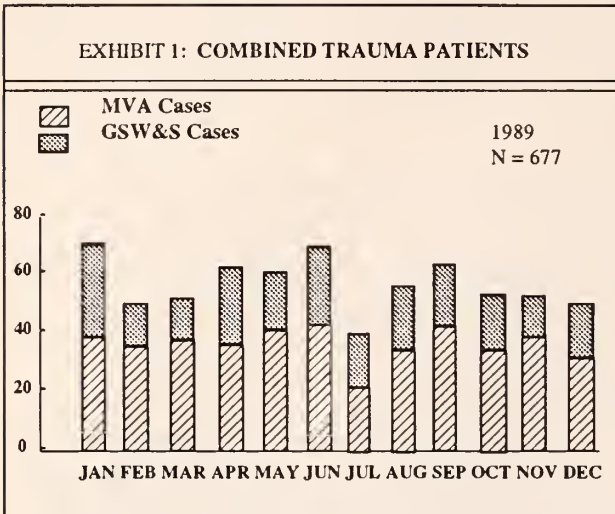
## Trauma Care Issues

An important point to be made is that the University Hospital is a facility which has many resources available nowhere else in Mississippi. The hospital's mission as a tertiary center is to serve the entire state - not a single county or region. Patient origin data indicate that the hospital meets that mission remarkably well, given a constrained resource base which is frequently stretched beyond its limits, especially in



the arena of trauma care.

During calendar year 1989, 677 inpatients were attributable to the aggregate category described as combined trauma. The number of admissions fluctuated, on a monthly basis, between forty and eighty (Exhibit 1). However, there was a far more signifi-

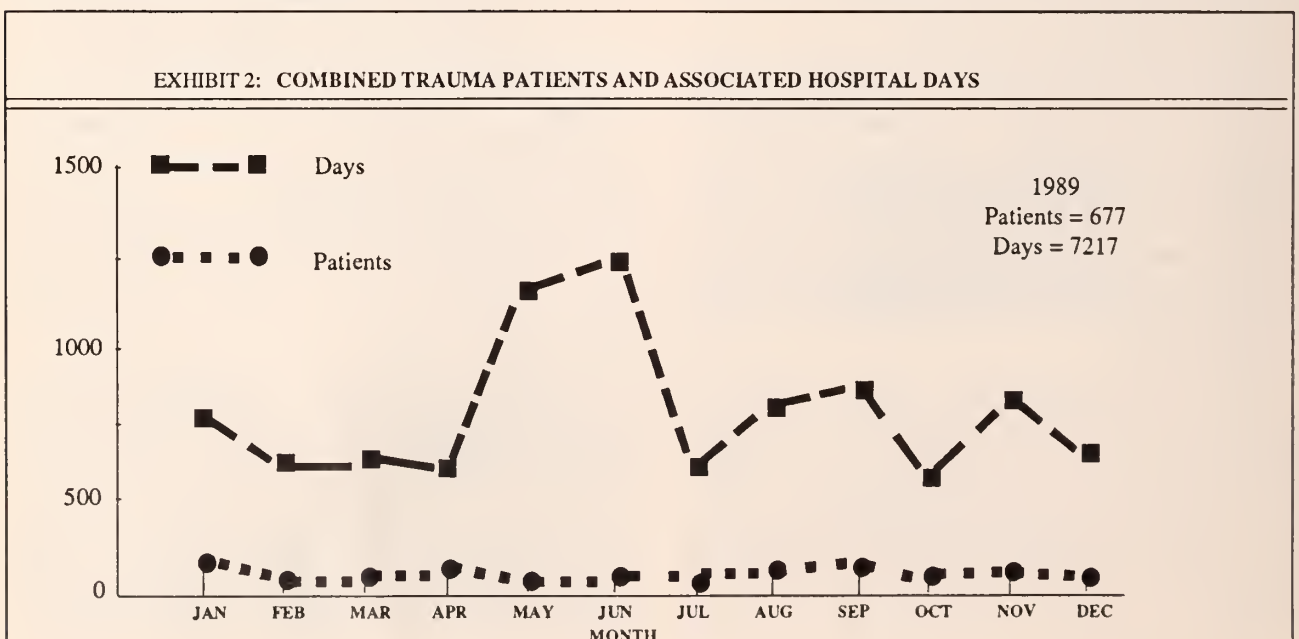


cant fluctuation in patient hospital days resulting from these admissions. The variation in hospital days was caused by two factors: (1) a fluctuation in the average length of stay (ALOS) of MVA patients (from 8 to 17 days, depending upon the month), and (2) a fluctuation in the ALOS of GSW&S patients (from 5 to 25 days, depending upon the month). From the perspective of a non-physician, this fluctuation would appear to be attributable to differences in the severity of patient injuries. (Exhibit 2).

This raises another important issue. Which patients should a Level I Trauma Center serve? To the extent that the University Hospital is expected to provide care other than to Level I patients, the ability of the hospital to care for the most severely injured patients will be compromised. Given the hospital's high occupancy rate, a patient occupying a bed in the University Hospital, who could have been adequately cared for at another facility, requires resources that otherwise could have been utilized to provide care for a more seriously injured patient.

The status of the hospital's surgical intensive care unit (SICU) is another factor of concern. Although it has the potential to house eighteen patients, current SICU utilization ranges from eight to twelve patients, with obvious fluctuation on a monthly basis. During each of the last four years, however, the unit's average occupancy has steadily increased. An inability to use more beds is related, in large part, to the level of nurse staffing, and to the overall nursing shortage in Mississippi.

Accreditation standards of the Joint Commission on Healthcare Organizations (JCAHO) have also had an impact. Following this organization's last full survey of the University Hospital (in 1987), adverse comments were received relative to nurse/patient ratios. Similar comments were made during a nursing-focused survey by the JCAHO more recently. As a result, the hospital has had to more stringently observe accreditation requirements. Despite this situation, nurses have been recruited successfully (although not to the extent desired), more SICU beds have been





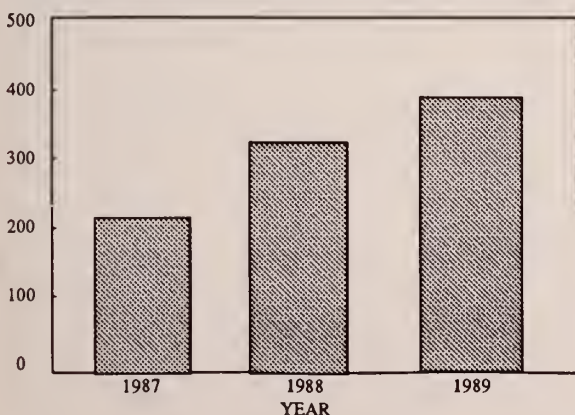
made available, and patient throughput is maximized to the extent possible.

The bed utilization issue in SICU has been largely responsible for what is called "diversion," internally. Diversion results in a notification to outside agencies, most notably ambulance services and other Jackson-area hospitals, of the University Hospital's inability to handle any additional patients with specific needs. In essence, initiating a type of diversion, such as SICU or MICU diversion, precludes the acceptance of another patient who might require the resources of that specific clinical area of the hospital. A decision to initiate one form of diversion or another, is the result of a request from the physician (medical director) who has overall medical responsibility both for a particular critical care nursing unit and the patients in that unit. Coordination of internal announcements is handled administratively, through the administrator-on-call, to the adult emergency room attending physician who is then responsible for external communication of this status.

Another issue related to the SICU is derived from the fact that this unit must serve needs in addition to those of trauma patients. From August 1 through December 31, 1989, 264 patients were cared for in the SICU. Sixty-nine patients (26%) resulted from trauma diagnoses. One hundred seventy-five (74%) were non-trauma patients. Those patients admitted for trauma care originated from a number of clinical services. Fifty-five percent (38 patients) were admitted by the trauma division of the Department of Surgery. Thirty-five percent (24 patients) were admitted by the Department of Neurosurgery. The remaining ten percent (7 patients) were admitted by other services, such as orthopedics.

However, as has been demonstrated, these SICU

**EXHIBIT 3: TRAUMA SERVICE SURGICAL CASELOAD**



admission statistics are not indicative of the total volume of trauma patients admitted to the University Hospital. Trauma patients are also admitted to other critical care units and to the general medical/surgical nursing units. In addition, the post-anesthesia care unit, or recovery room, provides backup to the SICU, and frequently has from two to four critical care patients occupying recovery room slots around the clock. It is not uncommon for a trauma patient (or other surgical patient who would otherwise be placed in the SICU) to go from surgery to the recovery room, and spend several days in this area because SICU is unable to handle the additional workload. These patients are then transferred to a routine nursing unit when the intensity of required care permits.

Another indicator of the trauma workload is the number of surgical cases performed by the trauma division of the Department of Surgery. During 1989

**EXHIBIT 4: COMBINED TRAUMA PATIENT FINANCIAL INFORMATION**

Total charges	\$1,954,772
Total payments	971,657
Uncollected	\$ 983,115

N= 186 Patients, treated from October 1989 through January 1990.

the caseload for this division almost doubled, to 400 cases, from the level of 1987 (Exhibit 3). On a monthly basis, this means that the trauma division averaged

**EXHIBIT 5: COMBINED TRAUMA PATIENT AVERAGE FINANCIAL DATA**

Charges	\$10,509	
Receipts	\$ 5,224	(49.7%)
Uncollected	\$ 5,285	(50.3%)

N = 186 Patients, treated from October 1989 through January 1990.

more than thirty surgical cases. As noted previously, the trauma division is just one of several clinical services or departments routinely involved in providing care to, or admitting, trauma patients.



## Financial Realities of Trauma Care

Turning again to the one hundred eighty-seven MVA and GSW&S patients admitted between October 1, 1989 and January 31, 1990, one is able to examine the health insurance profile of these individuals. (The financial records of 186 patients were complete and used for analysis.) The hospital's gross charges for providing care to this group amounted to \$1,954,772. (Individual patient bills ranged from \$603 to \$118,044.) Of the total amount, the University Hospital received \$971,657, which left an uncollected balance of \$983,115 (Exhibit 4). On the basis of an average patient, these data equate to \$10,509 in charges, \$5,224 (49.7%) in receipts, and \$5,285 (50.3%) of free care (Exhibit 5).

By payor class, more than forty-eight percent of this patient grouping lacked health or accident insurance of any sort. Only twenty-six percent were covered by Blue Cross or some other form of commercial insurance, and less than nineteen percent had Medicare, Medicaid or another form of governmental coverage.

Although an individual's financial status is not a barrier to the treatment of trauma patients at the University Hospital, it may prove to be a significant issue in the formation of a trauma network. Remember that financial losses are cited most frequently as the cause of hospitals dropping out of such networks.

## Summary

There are a number of complicating factors which do, or have the potential to, impact trauma care at the University of Mississippi Medical Center and the University Hospital. These are (Exhibit 6):

- Number of Trauma Patients. There are more trauma patients in Mississippi than any single hospital or group

of physicians can care for under present circumstances.

- Type of Trauma Patients. The only Level I center is constantly stressed with trauma patients, many of whom could be adequately treated at other facilities.
- Hospital Resources. Resources are frequently stretched beyond reasonable limitations. Primary examples include the SICU and nursing personnel on numerous units.
- Lack of a Trauma Network. The effects of the first three factors are compounded by the lack of a trauma network in the State of Mississippi.
- Trauma Funding. The lack of trauma funding, on a statewide basis, for equipment and other needed resources impairs the ability of all hospitals (including the University Hospital) to meet the needs of trauma patients.
- Patient Finances. Tied to the lack of specific funding is the financial case mix of trauma patients. It is simply not financially worthwhile for hospitals or physicians to involve themselves, on a regular basis, in the care of these patients.

These issues are related to one another in a complex fashion. Many are beyond the scope of the University Hospital and the University of Mississippi Medical Center to resolve. But, they adversely impact our facilities, and others throughout the state, on a daily basis.

As these issues are reviewed and thought about, one final fact should be kept in mind. That is, that among all states, Mississippi has the third highest death rate resulting from accidents, with more than fifty deaths per one hundred thousand citizens.

---

*David E. Bussone is Hospital Director, The University Hospitals and Clinics, The University of Mississippi Medical Center.*

### EXHIBIT 6: COMPLICATING FACTORS

- Number of trauma patients
- Type of trauma patients
- Hospital resources
- Lack of trauma network
- Trauma funding
- Patient finances



# Where there's smoke...there may be bronchitis



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*Am Fam Phys* 1987;36:133-140

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For respiratory tract infections due to susceptible strains of indicated organisms

#### Brief Summary.

Consult the package literature for prescribing information.

**Indication:** Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A  $\beta$ -hemolytic streptococci).

**Contraindication:** Known allergy to cephalosporins.

**Warnings:** CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

#### Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

#### Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon.

Those reported include:

- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100), pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritic/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, serum-sickness-like reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis,

and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

#### Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistix<sup>®</sup> tablets but not with Tes-Tape<sup>®</sup> (glucose enzymatic test strip, Lilly).

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.



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## The President's Page

J. ELMER NIX, MD

### ALMS FOR THE POOR

Recently I pointed out that no solution had been found to the problems associated with access to medical care. This problem looms like a dark cloud over the entire nation and especially is this true in Mississippi. In our state, 18% of the population falls under the poverty level income as defined by the Federal Government, whereas nationwide this figure is only 13%. We have between 500,000 and 600,000 uninsured in Mississippi. Many of these people are going without proper medical care.

In 1965, the Medicaid program was started with its intent being to permit the poor to get into "mainstream" medical care. This lofty goal has not been reached in Mississippi. Our poor Mississippi patients are still not getting into "mainstream" medical care --- they are still not getting what most of us consider to be "basic and necessary" health care. Recent articles in the MSMA Journal have documented this, and there are many reasons and many factors involved in this problem. Some of these relate to funding of the Medicaid Commission, fees paid by Medicaid, patient education, etc. These are problems that physicians cannot solve but we have an obligation to participate in trying to identify problems and develop solutions.

The fact remains however that many poor Mississippians are not getting adequate and proper health care and these people are our neighbors, our friends, our employees, our patients, our fellow Mississippians. It seems that the time is overdue for Mississippi physicians and surgeons to come forward with some positive proposals to alleviate this problem. One positive proposal is for physicians to provide more "charity care".

Have physicians in Mississippi grown fat and lazy? Are we no longer willing to devote some of our time and energies to the care of "charity" patients? Twenty-five years ago we did this regularly and felt it was just part of being a doctor. As the majority of patients came to be covered under some type health insurance, it appears that physicians have perhaps forgotten about "alms for the poor".

Your MSMA is advocating a voluntary "fair share" approach to the care of Medicaid patients --- and I urge you to extend that concept to all poor patients. We,

*(Continued on page 95)*



## Managed Care or Managed Chaos?

"Managed care" is the latest buzzword in the business of cost control of health care. This method of cost control may be the greatest threat yet to the concepts of physician-patient relationship and continuing care, concepts of utmost importance to most practicing physicians. And make no mistake about it, the primary goal of managed care is cost control, pure and simple. In spite of claims of managed care programs that "quality health care" is a primary objective, it is obvious that quality takes a back seat to strict cost control. It also seems obvious that the traditional role of the physician as manager of the care of individual patients on a personal and continuing basis is usurped in some degree in all of these programs. Whether or not physicians bear some or all of the responsibility for this evolving state of affairs is a matter for reflection.

To be more specific, consider the hypothetical case of a patient, or family, forced, by the financial disincentives of their company's managed care program, to change physicians. The disruption of a satisfactory and long-term physician-patient relationship may be the result. But that is only the beginning. What happens the next year, and the next, if the company finds a "better deal" with another managed care program? How often will patients be forced, by economic coercion, to change their source of health care? Consider the liabilities to the patients' health as well the legal ramifications to those providing care in a forced and possibly undesired relationship. Is this environment likely to provide true quality health care? Objective answers to this question probably do not exist at present, but it is likely that the vast majority of informed physicians would answer a resounding NO!

A question to be considered is the following: Will managed care impact upon and disrupt the delivery of continuing care and the physician-patient relation-

ship to such a degree that physicians will accept with open arms a National Health Insurance program that guarantees freedom of choice of provider with costs being controlled by negotiated fee schedules and rationing of services? The answer might well be yes.

George E. Abraham, II, MD  
Associate Editor

## Presidents 's Page

*(Continued from page 94)*

Mississippi physicians, can all afford to provide some free care and some care at reduced payment levels, without suffering any major economic losses. I implore each of you to do some introspection and soul searching. Ask yourself "Am I really doing my fair share in caring for the poor people of Mississippi?" You might even go so far as to ask your hospital administrator if your hospital is truly doing its fair share in this effort. Perhaps we should have a Doctor-Hospital Coalition to address this problem. It is a major problem and it is ours, right here, in Mississippi, for Mississippi physicians. Community service, like the weather, is something that we all talk about but no one does anything about it. When did you last render any (free) service to your community? Opportunity is knocking at your door again. Give some of you time and effort to a less fortunate person. It won't hurt much. Try it, you might like it.



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# AMA Delegates Report

**ALTON B. COBB, MD, MPH**  
Alternate Delegate

When Lamar Weems offered me the appointment to complete the term of an alternate delegate who resigned, I was pleasantly surprised. After thinking it over for a few days, I accepted. I saw my serving as an opportunity to learn about the AMA and to hear health policy discussed in a different forum from my usual governmental agency-sponsored meetings.

Since other delegates have described the size, composition, and organization of the House of Delegates, I will devote my remarks to some of my impressions from attendance at several meetings.

The AMA House of Delegates is a representative body of its membership. Delegates depict diverse backgrounds, specialties, and political persuasions. Those who think of the AMA as a monolith have an incorrect image!

The other characteristic of the House of Delegates which has impressed me is its democratic process. Resolutions are introduced and referred to a committee for full and open discussions. When the Reference Committees report their recommended actions on Reports and Resolutions to the full house, delegates again get opportunity for debate. The rules and procedures for the House allow the democratic process to work well.

The science of medicine together with the social conscience of medicine generally prevails in the AMA House. I was never prouder of my profession and its leadership through the AMA than during debate on the question of editorial independence and freedom for the editor of the *AMA News*. Dr. Todd addressed the House. He emphasized that freedom for the editor was the difference between our being a profession and many other groups' being a trade or business. AMA owns *AMA News*, but the *News* must provide editorial and journalistic freedom to be a publication with readership and influence. Medicine is truly a profession.

At the meetings of the House I have covered Reference Committee D, the committee which considers all items related to public health in the broadest context.

Many items referred to this committee have been familiar to me, but various others have been new or certainly were presented in a different orientation.

In recent years, public health issues have been high on the public policy agenda. As a result, Committee D debates items such as those dealing with the environment, infectious diseases (HIV, syphilis, hepatitis B, etc.) drug abuse, and injury control.

Committee D also considers important reports from the Council on Scientific Affairs (CSA). At A-90, for example, Committee D reviewed and reconfirmed the CSA Report on Drug Testing Guidelines originally published in 1989. This report, an excellent overview of this complicated subject, can help anyone who needs a scientific reference for designing a program or who may be asked by a school board or a legislative committee for policy guidance on the indications for drug testing.

In my view, the AMA House provides an invaluable service to all of us involved in public service related to the public's health. No other such forum with the quality of research and staff support exists to keep our policy on a scientifically sound basis and to guide policy development with the compassion and concern of physicians.

In the words of Joe Johnston, "I am proud to be a physician!"

Thanks to MSMA for providing me this opportunity for growth and service.

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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **Opinions on Hospital Relations**

### **Admission Fee**

Charging a separate and distinct fee for the incidental, administrative, non-medical service the physician performs in securing the admission of a patient to a hospital is not in keeping with the traditions of the American Medical Association and is unethical.

---

### **Assessments, Compulsory**

It is improper to condition medical staff membership or privileges on compulsory assessments for any purpose.

---

### **Billing for Housestaff Services**

When a physician assumes responsibility for the services rendered to a patient by a resident, the physician may ethically bill the patient for services which were performed under the physician's personal observation, direction and supervision.

---

### **Economic Incentives and Levels of Care**

The primary obligation of the hospital medical staff is to safeguard the quality of care provided within the institution. The medical staff has the responsibility to perform essential functions on behalf of the hospital in accordance with licensing laws and accreditation requirements. Treatment of hospitalization that is willfully excessive or inadequate constitutes unethical practice. The organized medical staff has an obligation to avoid wasteful practices and unnecessary treatment that may cause the hospital needless expense. In a situation where the economic interests of the hospital are in conflict with patient welfare, patient welfare takes priority.

---

### **Organized Medical Staff**

The organized medical staff is an integral part of the

hospital structure. Under authority delegated by the governing board it performs essential hospital functions. The organized medical staff conducts professional activities that are designed to improve professional skills and to enhance the quality of patient care in the hospital.

The organized medical staff performs essential hospital functions even though it may often consist primarily of independent practicing physicians who are not hospital employees. As a practical matter, however, the organized medical staff may enjoy a dual status. In addition to functioning as a division of the hospital, members of the organized medical staff may choose to act as a group for the purpose of communicating and dealing with the governing board and others with respect to matters that concern the interest of the organized medical staff and its members. This is ethical so long as there is no adverse interference with patient care or violation of applicable laws.

---

### **Physician-Hospital Contractual Relation**

There are various financial or contractual arrangements that physicians and hospitals may enter into and find mutually satisfactory. A physician may, for example, be a hospital employee, a hospital-associated medical specialist, or an independent practitioner with staff privileges. The form of the contractual or financial arrangement between physicians and hospitals depends on the facts and circumstances of each situation. A physician may be employed by a hospital for a fixed annual amount, for a certain amount per hour, or pursuant to other similar arrangements that are related to the professional services, skill, education, expertise, or time involved.

Any conduct that results in the provision of unnecessary services or overutilization of services or facilities is, of course, unethical and should be discouraged. If such problems arise, though, these problems should



be addressed directly and considered in the light of the facts and circumstances of the particular situation.

### Staff Privileges

The mutual objective of both the governing board and the medical staff is to improve the quality and efficiency of patient care in the hospital. Decisions regarding hospital privileges should be based upon the training, experience and demonstrated competence of candidates, taking into consideration the availability of facilities and the overall medical needs of the community, the hospital and especially patients. Personal friendships, antagonisms, jurisdictional disputes or fear of competition should be disregarded in making these decisions. Physicians who are involved in the granting, denying or termination of hospital privileges have an ethical responsibility to be guided primarily by concern for the welfare and best interests of patients in discharging this responsibility.



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**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon® is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.<sup>1,2</sup> Also dizziness, headache, skin flushing reported when used orally.<sup>1,3</sup>

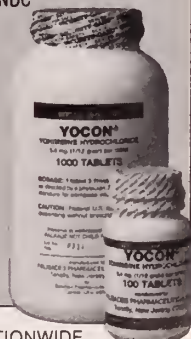
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.<sup>1,3,4</sup> 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.<sup>3</sup>

**How Supplied:** Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

#### References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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# Medical Organization



*Dr. Fred McMillan, left, MSMA Board of Trustee member representing Central Medical Society and Dr. J. Elmer Nix, MSMA president attended Central's quarterly meeting.*

## MSMA President Dr. J. Elmer Nix Speaks to Medical Society Meeting

MSMA President Dr. J. Elmer Nix spoke to the Central Medical Society quarterly meeting in Jackson on February 5. While speaking to his home society, Dr. Nix

addressed socio-economic issues and gave a current update on The Mississippi State Medical Association.

Dr. Nix reviewed federal budget cuts to the Medicare program, proposed new requirements for Medicaid, anti-hassle legislation, and the RBRVS. On the state level he talked about the current status of MSMA proposed legislation. Dr. Nix also gave the society an overview of current operations of the MSMA including such areas as MMPAC, The MS Foundation for Medical Care, The Medical Assurance Company of MS, and MSMA Services.

He also discussed the benefits physicians receive through their MSMA membership. These benefits include: a voice in shaping the health care system and association policy, representation with the state legislature, congress and governmental regulatory agencies, and the assurance that medicine's views are expressed.

Dr. Nix has had the opportunity, so far, to visit with over half of Mississippi's component medical societies.

## Drs. Tillman and Johnston Presented Laureate Award

Dr. Clifford Tillman, Natchez cardiologist and internist and Dr. Ben Johnson, Jackson internist, were awarded the Laureate Award of the American College of Physicians on February 22 at ceremonies held at the Windsor Court Hotel in New Orleans during a meeting of the American College.



*Members of Central Medical Society participate in quarterly meeting*



The prestigious award is given to physicians who are judged to be outstanding as fellows in the American College of Physicians and who have exemplified the highest ideals in medicine as physicians. The award is restricted to those who have contributed significantly to medicine and to their communities both in cultural and in civic endeavors.

The Laureate Award has been presented in the past only to six other physicians in the state of Mississippi.

Dr. Tillman has been engaged in medical practice in Natchez since 1951. Prior to returning to his birthplace to enter practice, he had completed a five-year residency in internal medicine after graduating summa cum laude from Vanderbilt Medical School. He also served as a captain in the Army Medical Corps in World War II.

Dr. Johnson is currently on the clinical staff of the University Medical Center, Department of Medicine, Division of Nephrology and served as associate professor of medicine, division of nephrology. He has also served as director of the Internal Medicine Residency Program at UMC. Dr. Johnson is a member of the Western Society for Clinical Investigation and is on the Board of the Kidney Foundation of MS which he helped organize in 1965. He received his MD degree from Harvard Medical School and completed a medicine residency at Bellevue Hospital in New York. He was also a research fellow at Stanford University.

## Auxilians Hold Board Meeting In Jackson

The MSMA Auxiliary held its winter board meeting in Jackson on February 12, at the Ramada Renaissance Hotel. During the business session, auxiliaries heard reports from Auxiliary officers and committee chairman. There were also reports from county presidents, a legislative update and a report from those who attended Confluence in Chicago the first of February.

Barbara Shelton, MSMA Auxiliary staff executive, reported on plans for **Health Choice 91** a teen health seminar to be held April 5 in Hattiesburg. This health seminar is sponsored jointly by MSMA and the MSMA Auxiliary. South Mississippi-Hattiesburg auxiliaries are preparing lunch for the session and Central Auxiliaries are providing healthy snacks during breaks. Approximately 200 participants are expected for **HealthChoice 91** including: 5 students from each of the twenty schools who participated in the Comprehensive Health Education Pilot Program and their teachers, principals, superintendents.

At the conclusion of the business session committees had the opportunity to meet and make plans for the MSMA Auxiliary Annual Session to be held in May.

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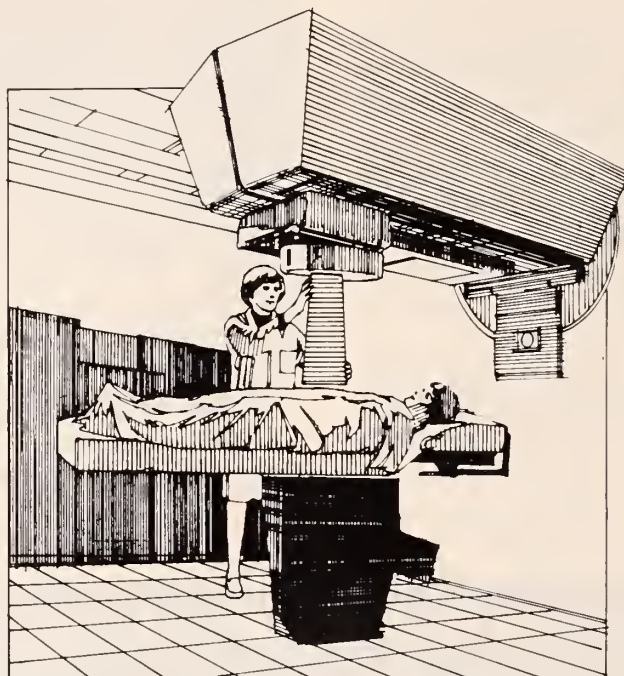
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# *United States Senate*

Washington, D.C. 20510

## FLOOR STATEMENT BY SENATOR THAD COCHRAN "NATIONAL DOCTOR'S DAY" MARCH 9, 1990

Mr. President, today I introduce a resolution designating March 30, 1991, as "National Doctor's Day" in recognition of the invaluable contribution physicians have made to the Nation and continue to make in our daily lives.

Physicians promote the science and art of medicine and the betterment of public health. Through their efforts -- in practice, research, teaching, and medical administration -- the discoveries and applications of medical science and medical knowledge become real for each of us.

Approximately 586,000 physicians in 37 specialties practice medicine in the United States today, each playing an important role in meeting American's medical needs. We all have felt the comfort of receiving care from a trusted family doctor and the confidence of having unusual medical questions answered by competent specialists.

Doctor's Day was first observed regionally on March 30, 1935, when it was begun by the Southern Medical Association in St. Louis, Missouri. Since then, it has been observed yearly in many States to show appreciation for the role of physicians in caring for the sick, advancing medical knowledge, and promoting improved public health. Recognition of March 30, 1991, as "National Doctor's Day" would add significantly to this fine tradition.

I am pleased to sponsor this resolution, and I hope other Senators will support its passage.



# DOCTORS' DAY RESOLUTION

104 STAT. 1096

Public Law 101-473-Oct.30, 1990

Public Law - 473

101st Congress

Joint Resolution

Oct. 30, 1990

(S.J.Res. 355)

**To designate March 30, 1991,  
as "National Doctors Day"**

**W**hereas society owes a debt of gratitude to physicians for the contributions of physicians in enlarging the reservoir of scientific knowledge, increasing the number of scientific tools, and expanding the ability of health professionals to use the knowledge and tools effectively in the never-ending fight against disease; and

**W**hereas society owes a debt of gratitude to physicians for the sympathy and compassion of physicians in ministering to the sick and in alleviating human suffering: Now, therefore, be it.

**R**esolved by the Senate and House of Representatives of the United States of American in Congress assembled, That--

- (1) March 30, 1991, is designated as "National Doctors Day";  
and
  - (2) the President is authorized and requested to issue a proclamation calling on the people of the United States to observe the day with appropriate programs, ceremonies, and activities.
- 

Approved October 30, 1990

LEGISLATIVE HISTORY-S.J. Res.36

CONGRESSIONAL RECORD, Vol. 136 (1990)

Sept.28,considered and passed Senate.

Oct.16, considered and passed House.



## Council to Authors

The JOURNAL welcomes manuscripts which should be submitted to the Editors at 735 Riverside Drive, Jackson, MS 39216, in original and at least one duplicate copy. They must be typewritten double spaced on 8 1/2 by 11-inch white paper. **Brief manuscripts (about 2,500 words or 8 pages) will be given preference over longer articles.**

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All copy must be double spaced, including legends, footnotes, and references. Generous margins at the top, bottom, and on both sides of the page should be allowed. Each page after the title page should be consecutively numbered and carry a running head identifying the paper and author.

Titles should be short, specific, and clear. Ordinarily, a title should not exceed 80 characters, including punctuation.

**References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list.** Textbook, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the Index Medicus, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

Manuscripts accepted for publication are subject to copy editing. Authors will receive galley proof prior to publication. Galley proof is only for correction of errors, and text changes may not be made. The galley proof should be returned by the author within 48 hours from receipt, and no further changes made.

Illustrations consist of all material which cannot be

set into type such as photographs, line drawings, graphs, charts, and tracings. Illustrations should be submitted separately from text copy. Figures and drawing should be professional prepared with black ink on white paper. Photographs should be of high resolution, unmounted, untrimmed, glossy prints. Each must be clearly identified. No charges are made to authors for up to four illustration engravings. More are not permitted unless voted on by two editors and extra costs must be absorbed by the author.

Illustrations must be numbered and cited in the text. Legends, not exceeding 40 words and preferably shorter, must accompany each illustration, typed double spaced or separate sheets. The following information should appear on a gummed label affixed to the back of each illustration: Figure number, manuscript title, author's name, and arrow indicating top of the illustration.

In photographs in which there is any possibility of personal identification, an acceptable legal release must accompany the material.

A thesis summary of 75 to 100 words must accompany each manuscript.

Reprints may be obtained at cost plus shipping charges from the association and **should be ordered prior to publication.** The JOURNAL reserves the right to decline any manuscript. Authors should avoid placing subheads in the text, and the Editors reserve the prerogative of writing and inserting subheads according to Journal Style. -- *The Editors.*

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Mississippi State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manu-



## Personals

**Paul M. Allen** of Gautier attended the 16th Annual Conference of the Alliance for Continuing Medical Education in California during January.

**Sandra F. Burford** of Vicksburg was selected as a member of the board of editors for *Patient Care*, a journal for primary care physicians.

**Ralph Didlake** of Jackson has been initiated as a fellow of the American College of Surgeons.

**R. J. Field, Jr.** of Centerville was visiting professor of surgery at the University of Tennessee in Chattanooga and spoke to the Chattanooga Surgical Society during February.

**Alan E. Freeland** of Jackson has been elected chief of surgery at Mississippi Methodist Rehabilitation Center.

**Michael E. Jabaley** of Jackson was a speaker recently at the New England Hand Club on the topic "Nerve Repair in the 90's".

**James Edgar Hand** has associated with The Field Clinic in Centerville, in the practice of Internal Medicine and Family Practice.

**Ken Hensarling** of Jackson has been elected to the Board of Trustees and medical staff president at Mississippi Methodist Rehabilitation Center.

**William F. Kliesch** of Jackson has been elected secretary/treasurer of the medical staff at Mississippi Methodist Rehabilitation Center.

**John E. Lindley** of Meridian has been named for inclusion in "Who's Who in Mississippi."

**Lawrence W. Mahalak, Jr.** of Jackson has been elected chief of medicine at Mississippi Methodist Rehabilitation Center.

**David A. Makey** of Meridian recently received recertification from the American Board of Surgery.

**Lynn B. McMahan** of Hattiesburg was featured in *Ophthalmology Times* for a new type of suturing technique for cataract surgery.

**John E. Mitchell** of Rolling Fork has been recertified as a diplomate of the American Board of Family Practice.

**William C. Nicholas** of Jackson has recently given presentations on

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The American Medical Association  
on behalf of member physicians and their patients.



A message from The American Medical Association for the Health Access America Proposal



## Personals continued

advances in diabetes to: hospital and medical staff in Greenwood and Jackson and physicians in Lavonia and Athens, GA.

Ben Sanford of Starkville was a guest on *Focus Our Community's Health*, a television special discussing cardiovascular care.

Horton G. Taylor of Ripley who serves as a Colonel in the Mississippi National Guard was named Officer of the Quarter by Detachment II, 134th Combat Support Hospital at Elliot, MS.

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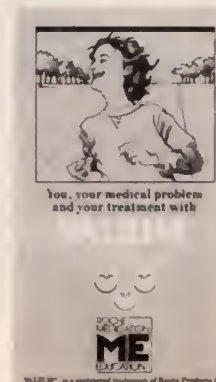
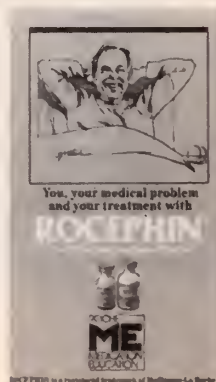
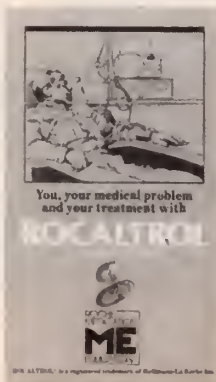
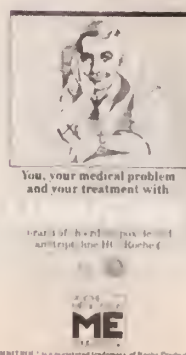
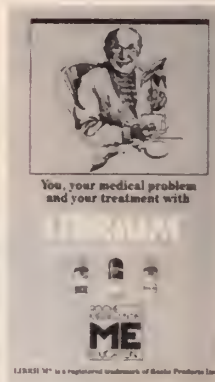
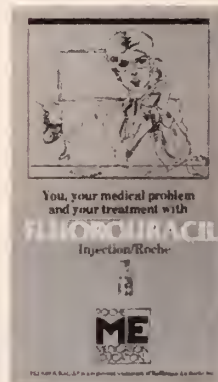
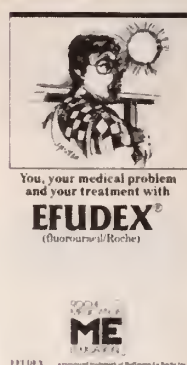
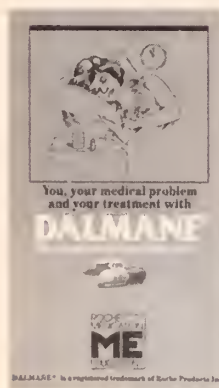
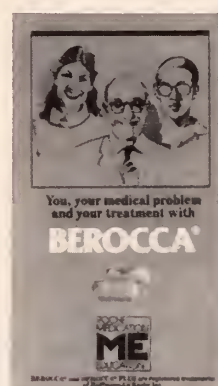
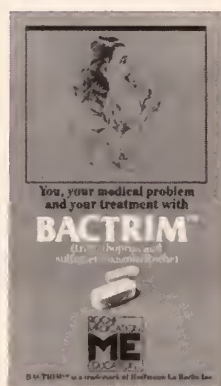
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NUMBER 4

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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 4

April 1991

Dear Doctor:

This issue of your Journal includes information on the 123rd Annual Session which will be held May 15 -19 at the Royal d'Iberville Hotel in Biloxi. The agenda for the five days includes activities for the whole family, so make your plans to attend now. Information about the annual session begins on page 140.

A workshop entitled **"CPT Coding: Beyond the Basics"** sponsored by the Mississippi State Medical Association and presented by the AMA Practice Management Department is being held in three locations throughout the state.

The dates and locations are:

<b>Tuesday, May 7,</b>	Ramada Inn, Columbus;
<b>Wednesday, May 8,</b>	Holiday Inn Downtown, Jackson;
<b>Thursday, May 9,</b>	Ramada Inn, Hattiesburg.

Registration will begin at 8:00 am in each location. The 8:30 am to 2:15 pm session will cover CPT Coding: Beyond the Basics and the 2:30 pm - 3:30 pm session will cover Medicare Policies. The workshop fee of \$75.00 includes workshop materials, lunch and coffee breaks. For additional information, call 354-5433 or 1-800-898-0251.

The American Psychiatric Association will hold its 144th Annual Meeting in New Orleans, LA, May 11- 16, 1991. Operating under the theme "Our Children: Or Future," the event will feature over 600 presentations covering some 48 topics including infant and childhood disorders, child and adolescent psychiatry, the Persian Gulf War, AIDS, homelessness, infant and childhood disorders, substance abuse, treatment techniques and managed care.



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# Dateline

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 4

## **Panelist Say Safety of Gall Bladder Surgery Established**

**Chicago, IL** - Laparoscopic cholecystectomy, a new surgical procedure for removing the gallbladder, is an "appropriate treatment, with respect to its safety and effectiveness" for uncomplicated gallstones, a panel of experts report in the March 27th issues of the Journal of the American Medical Association.

The panel of 10 abdominal surgeons, four colon and rectal surgeons, six general surgeons and 20 gastroenterologists, was put together by the AMA's Diagnostic and Therapeutic Technology Assessment (DATTA) program. The results reflect the views of the panelists and reports in scientific literature as of December 7, 1990.

The procedure's advantages over open cholecystectomy include "reduced postoperative discomfort, a more cosmetically acceptable scar, a shorter hospital stay, and an earlier return to full activity," the report says. Most patients are discharged the morning after surgery; at some institutions many of the procedures are done on an outpatient basis.

## **TB Screening System Works**

**Jackson, MS** - Three Mississippi inmates with active tuberculosis are getting needed treatment, and another 352 newly discovered as TB-infected must get preventive therapy.

Public health and corrections officials found the new infections and active tuberculosis cases largely through the January screening of some 6,400 inmates in prisons and jails.

"The screening system works," said Dr. Robert Hotchkiss, State Department of Health TB Control Program medical director. "We discovered evidence of spread of infection, with over 200 Parchman inmates and 31 at the South Mississippi facility newly infected. The three individuals with active TB could have spread the disease as they're moved around within the correction system and upon their release. These are cases we know we can control."

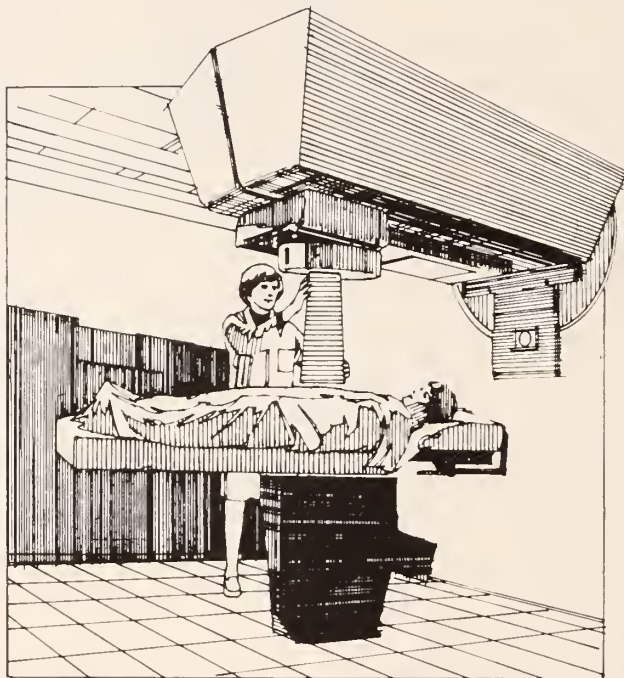
Correctional institutions generally pose particularly high threats for TB infection. The January 1991 screenings showed infection rates of 24.6 percent at Parchman; 31.5 percent at South Mississippi Corrections Facility; 17.5 percent at Central Mississippi; and 13.5 percent at the community work centers statewide -- an overall infection rate of 22.5 percent. The February 1990 overall infection rate showed slightly less at 22.2 percent.

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# Physiologic Stress In First-Year Residents: A Preliminary Study

GREGORY H. BLAKE, MD, MPH  
ELIZABETH WALLEY, MEd.  
Jackson, Mississippi

### Objective

To determine the effect of stress in the first year of residency (PGY-1) on endocrine and immune function.

### Design

Prospective descriptive study.

### Setting

Midwestern university - health science center.

### Participants

Nine residents participating in a transitional PGY-1 year.

### Interventions

The residents underwent venipuncture for serum testosterone and lymphocyte mitogen stimulation levels in July of the PGY-1 year, during a high-stress month and at completion of the PGY-1 year.

### Measurements

Both serum testosterone and lymphocyte mitogen stimulation tests revealed decreases from July to the high-stress month and to the conclusion of the PGY-1 year using the analysis of variance for repeated measures. (F value = 4.74, testosterone and F value = 4.12, lymphocyte mitogen stimulation tests;  $p = 0.036$ ) Tukey-HSD revealed a decrease between the July and PGY-1 conclusion levels for serum testosterone levels. ( $p = 0.05$ ) No two periods were significantly different for the lymphocyte mitogen stimulation tests.

### Conclusion

These findings imply that the cumulative effects of stress continue to lower immune and endocrine function of physicians at the completion of the PGY-1 year.

Postgraduate year one (PGY-1) residents often experience stress from occupational lifestyle changes. Lack of sleep, inadequate support from senior professionals, large patient loads, and competition from peers contribute to job stress.<sup>1</sup> Changes in residence, marital relationships, number of children, education-related debt, and lessening of social interaction may also increase the level of stress.<sup>1,2</sup>

Stress has been shown to cause significant changes in endocrine and immune system functions. Decreased serum testosterone levels were found in heavy-goods vehicle drivers on driving days, in males aged 30-55 under high psychological stress, and in males up to six days after non-genitourinary surgery.<sup>3-5</sup> In addition, soldiers during basic combat training, during officers candidate school, and while under threat of attack were found to have decreased serum testosterone levels.<sup>6-7</sup> Decreased lymphocyte response to mitogen stimulation in response to stress was found in astronauts after space shuttle flights, in psychiatric trainees taking their final oral fellowship examinations, and in medical students taking their final oral fellowship examinations, and in medical students taking the National Board Medical Examination Part I.<sup>8-10</sup>

The present study sought to determine whether PGY-1 residents experience changes in endocrine and immune function in response to stressors involved in the first year of a family medicine residency training program.



## Methods

### Study Format

Sixteen PGY-1 family medicine residents at a university health science center were eligible to participate in the study. Blood for baseline serum testosterone and lymphocyte mitogen stimulation levels was obtained by venipuncture in the first month of residency. The tests were repeated during the third week of what was considered to be the high stress month and near the end of the PGY-1 year. The high stress month was determined by the ratings of the second and third year family medicine residents.

### Laboratory Analysis

All blood samples were drawn by venipuncture between 8:00 a.m. and 10:00 a.m. Family Medicine staff members served as laboratory controls.

Serum testosterone levels were evaluated by the "Coat-A-Count" No Extraction Testosterone Test, a solid-phase  $^{125}\text{I}$  radio-immunoassay designed for quantitative measurement of testosterone in unextracted serum or plasma. Blood for the lymphocyte stimulation tests was collected and transported at room temperature to the clinical laboratory at the health sciences center for fractionating of the cells by an immunoglobulin (IG) anti-IG-coated column. The resulting purified T-lymphocytes were challenged with phytohemagglutinin A and the effect evaluated at 2  $\lambda$ .

### Data Analysis

Test results were tabulated; then analysis of variance for repeated measures was utilized to determine the relationships among the mean values observed from baseline, mid-year high-stress rotation, and conclusion data. The Tukey-HSD procedure was utilized to

determine whether significant changes in the mean values existed among the baseline, mid-year high stress and conclusion levels.

### Results

Nine residents participated, 6 males and 3 females. The mean age of these residents was 30.3 years with a range of 25 to 35 years. All residents were Caucasian with the exception of one black female.

Serum samples were available at program entry, mid-year, and study conclusion for five males and two female residents. One male and one female resident failed to provide a blood sample at study conclusion and at mid-year sampling, respectively. The group mean scores for serum testosterone and lymphocyte mitogen stimulation tests were used to replace the missing data for each of these residents (5.4% and 7.4% respectively).

Both serum testosterone and lymphocyte stimulation tests levels revealed significant decreases from baseline during the high-stress month and at PGY-1 conclusion ( $F$  value = 4.74 [testosterone]; 4.12 [LST];  $p = 0.036$ ) using analysis of variance for repeated measures. (Table 1)

Tukey-HSD procedure revealed a significant decrease between the baseline and PGY-1 conclusion levels for serum testosterone levels ( $p = 0.05$ ). However, no two periods during the PGY-1 year were significantly different for the lymphocyte stimulation tests using the Tukey-HSD procedure.

### Discussion

Results suggest that PGY-1 residents experience changes in immune and endocrine function that increase in intensity as the year progresses. In this study, these physiological measures did not reach their lowest

Table 1. CHANGES IN PHYSIOLOGIC PARAMETERS

	Testosterone		Lymphocyte Stimulation	
	Mean	Standard Deviation	Mean	Standard Deviation
Program Entry	7.63 mg/dl	1.57 mg/dl	135,889	23,777
Mid-Year	6.20 mg/dl	1.60 mg/dl	124,626	35,756
Conclusion	5.6 mg/dl	.599 mg/dl	111,250	18,040



levels during the rotation considered the most stressful but appeared to decline progressively during the PGY-1 year, indicating that the response to stress may be cumulative.

Prior studies suggest that the serum testosterone levels rise within days of a stressor's amelioration. Plasma testosterone levels which were significantly decreased immediately before and two days after surgical stress rebounded to control levels by the sixth postoperative day.<sup>5</sup> The decline in plasma testosterone levels observed among soldiers early in officer candidate school increased during the less stressful late training phase.<sup>7</sup>

A decline in serum lymphocyte mitogen stimulation observed among students taking NBME Part I remained significantly suppressed for four weeks but returned to normal levels at six weeks.<sup>10</sup> Limited data from studies on tumor development and mitogen-induced lymphocyte proliferation suggest that the suppressed immune function may return to normal in repeatedly stressed animals.<sup>11</sup> Accordingly, the residents should have decreased immune function early in the first year of residency on a high stress month with a rebound noted during the year once a conditioning response has occurred. Instead there was a continued decline.

The implications of this study must be considered in light of its limitations. The small sample size makes it difficult to refute absolutely random variation as a cause of the data outcome. Additionally, individual resident's daily or monthly responses were not measured. Further, residents possess individual personality traits which may affect performance under stress; thus, the overall pattern of a resident's physiologic response to stress can only be hypothesized.

Due to individual differences, it is impossible to anticipate a resident's most stressful month so that an evaluation can be done. Also, our data may not be generalizable to other residencies due to program variability.

Our study provides documentation of decline in endocrine and immune function during the PGY-1 year. Further research is warranted to confirm these findings and correlate them with specific stressors.

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### Acknowledgements

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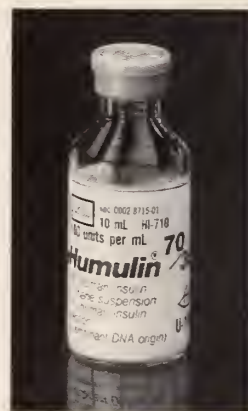


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# Retrieval of Renal Function by Revascularization of Renovascular Disease

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Jackson, Mississippi

Long-term retrieval of renal function and relief of renovascular hypertension are described in a patient with bilateral renal artery occlusive disease, who had been dependent on hemodialysis for more than 6 weeks prior to revascularization. Renal dysfunction due to renal artery occlusive disease is potentially reversible and this diagnosis should be considered in all patients with renal failure, especially in patients with other manifestations of occlusive peripheral vascular disease, those with severe hypertension, and those over 45 or under 20 years of age at the onset of hypertension (i.e., older or younger than the usual age for onset of "essential" hypertension). Renovascular disease should also be suspected in hypertensive patients with mild to modest impairment of renal function who demonstrate a sudden worsening of renal function following administration of an angiotensin-converting enzyme inhibitor. Effective and safe techniques for renal revascularization are available in almost all cases to achieve greater longevity and improved quality of life, as well as to reduce the economic impact of chronic renal failure and renovascular hypertension.

Chronic renal failure occurs in 600 of each million people in the United States. The leading causes, diabetes, glomerulonephritis and hypertension, each account for 20% of end-stage renal disease patients.<sup>1</sup> The incidence of renal failure due to arterial occlusive disease is difficult to determine because many patients who present with chronic renal failure are not evaluated for arterial insufficiency, and their renal dysfunction and associated renovascular hypertension are managed by Hemodialysis, and medical therapy, respectively. However, surgical revascularization in properly selected patients with renal artery occlusive disease may dramatically improve renal function and permit avoidance or discontinuation of hemodialysis,

and may cure or improve the management of associated renovascular hypertension. We report a recent patient, observed by the authors, whose critical renovascular disease was revascularized, resulting in retrieval of renal function, discontinuation of hemodialysis, and a significant reduction in antihypertensive medication.

## Case Report

A 49 year old white male was referred for the evaluation of renal failure, severe hypertension, and claudication. Hypertension with normal renal function was first seen 5 years earlier, after previously being normotensive on annual examinations. The hypertension was difficult to control and necessitated discontinuation of his usual employment. Six weeks prior to referral, he was admitted to another hospital for severe congestive heart failure, which was found to be secondary to sudden onset of renal failure (serum creatinine 11.0 mg/dl) and uncontrolled severe hypertension. Hemodialysis resulted in relief of congestive heart failure, but the hypertension was poorly controlled despite four concurrent medications. He also reported impotence and left buttock and thigh claudication on minimal ambulation. He was referred 6 weeks after initiation of hemodialysis.

Physical examination revealed a weak right femoral pulse and an absent left femoral pulse. An abdominal aortogram (Figure 1) demonstrated bilateral renal artery atherosclerotic occlusive disease, with a 95% stenosis of the left renal artery and total occlusion of the right. Residual function was seen on delayed films of the left kidney, but no function was detected in the right kidney. A radionuclide renal scan also revealed no function in the right kidney. Ultrasound





Figure 1. Renal arteriogram reveals 95% stenosis and post-stenotic dilation of the left renal artery (open arrow). The right renal artery is totally occluded and no patent distal artery is visualized (solid arrow).

examination estimated the length of the left and right kidneys to be 11.9 and 8.5 cm, respectively.

A bilateral aorto-renal bypass and simultaneous aorto-bifemoral bypass were performed. The patient began producing urine on the day of revascularization and has been independent of dialysis since operation. Eighteen months postoperatively, serum creatinine is 1.8 mg/dl and blood pressure is 130/80. He is taking only a single antihypertensive medication. A follow-up isotope renal scan revealed normal function in the left kidney, but little function in the right kidney despite reperfusion.

## Discussion

Atherosclerosis and fibromuscular dysplasia are the most common occlusive lesions affecting the renal arteries (Table 1). In general, there must be greater than 75% reduction of arterial cross sectional area to produce a significant flow reduction, which frequently results in renal dysfunction and renovascular hypertension if the renal arteries are affected.

Table 1: RENAL ARTERY OCCLUSIVE DISEASES

Atherosclerosis (70%)  
Fibromuscular dysplasia (25%)  
Takayasu's arteritis  
Dissection  
Aneurysm  
Emboli  
Extrinsic compression  
Trauma

Clinical clues that suggest renal artery stenosis may be the cause of or a contributing factor to the development of renal failure are listed in Table 2.<sup>2</sup> As in the case presented, initial sudden onset of severe hypertension, acute onset of renal failure and worsened hypertension, and the presence of other manifestations of peripheral vascular disease, each demand investigation of the renal arteries. Unequal renal length, perfusion, or concentration on radiographic examinations also suggest renal artery obstruction.

Table 2: CLINICAL CLUES SUGGESTING RENOVASCULAR DISEASE\*

- Epigastric, subcostal or flank bruit
- Unilateral small kidney discovered by any clinical study
- Accelerated or malignant hypertension
- Severe hypertension before 20 or after 50 years of age
- Sudden development or worsening of hypertension (any age)
- Hypertension and unexplained impairment of renal function
- Sudden worsening of renal function in hypertensive patient
- Decrease in renal function following administration of an angiotensin-converting enzyme inhibitor
- Extensive vascular disease in coronary, cerebral or peripheral circulation

\* Modified from reference no. 2; Arch Int Med 1987; 147:820-829

A sudden decrease in renal function, manifested by a rise in serum creatinine, within days of initiation of antihypertensive therapy with an angiotensin-converting enzyme (ACE) inhibitor, should also suggest investigation of the renal vasculature. As renal artery perfusion pressure falls because of increasing degrees of renal artery stenosis, glomerular filtration is maintained by angiotensin II-induced constriction of the glomerular efferent arteriole. When an ACE inhibitor is then given to a patient with either significant bilateral renal artery stenosis or unilateral stenosis in a single



functioning kidney, glomerular efferent arteriolar resistance, glomerular hydrostatic pressure, and glomerular filtration rate will fall and renal function will suddenly worsen. Cessation of the ACE inhibitor will generally restore renal function to its baseline level in 2-3 days.<sup>3</sup> Such an occurrence should alert one to the likelihood of significant renal artery stenosis. In the rare circumstance in which a sudden decrease in renal function is not reversed promptly on cessation of the ACE inhibitor, one should consider the possibility of an acute allergic interstitial nephritis, which (as we have recently noted), has only been reported with Captopril.<sup>4</sup>

Retrieval or stabilization of renal function by revascularization has been successful in 90% of properly selected patients.<sup>5,6</sup> Factors predictive of successful restoration of renal function after revascularization are listed in Table 3. Unilateral renal artery stenosis may result in dysfunction of the affected kidney and renovascular hypertension, but azotemia will not occur if the contralateral renal artery and kidney are normal. If significant azotemia (serum creatinine >3.0-4.0 mg/dl) does exist in this situation, in most cases both kidneys are dysfunctional due to hypertensive nephrosclerosis or other intrinsic renal disease that will not be reversible by revascularization.<sup>5</sup> There is a greater probability that renal dysfunction is secondary to hypoperfusion if there is bilateral renal artery stenosis or unilateral renal artery stenosis in a solitary kidney, and the potential for retrieval of renal function after revascularization in such cases is excellent.<sup>5</sup>

Table 3: FACTORS PREDICTIVE OF SUCCESSFUL RETRIEVAL OF RENAL FUNCTION BY RENAL REVASCULARIZATION

- Bilateral renal artery occlusive disease
- Unilateral renal artery occlusive disease with absent contralateral kidney
- Severe hypertension
- Renal length greater than 8.0 cm
- Residual function demonstrated by perfusion scan or concentration of contrast
- Patent renal artery distal to occlusion

The absence of severe hypertension indicates that renal artery stenosis is probably not hemodynamically significant, and is not the cause of renal dysfunction.<sup>5</sup> Because severe hypertension is present in most patients with renal dysfunction secondary to renal artery disease, cure or significant improvement in the renovascular component of hypertension occurs in 80-90% of patients after revascularization.<sup>5,7</sup> The potential for salvage of renal function is poor if no residual function is demonstrated by isotope scan or contrast radiographic imaging (i.e., late phase of arteriogram or rapid sequence intravenous nephrogram). Chronic ischemia frequently results in renal atrophy. There is little potential for retrieval of renal function if there is a reduction in the renal length to less than 8 cm., although salvage of function in smaller kidneys has occasionally been reported (usually in patients with well-developed collateral circulation and some demonstrable renal function preoperatively).<sup>5</sup> The length of time the patient is dependent on hemodialysis is not predictive of a low probability of retrieval of renal function after revascularization, as successes have been reported after dialysis-dependent periods of more than one year.<sup>8</sup>

A variety of procedures are available for renal revascularization. Aortorenal bypass and aortorenal thromboendarterectomy have been the most widely used. When there is no indication for simultaneous aortic reconstruction, we have increasingly utilized extra-anatomic revascularization with either hepatic artery to right renal artery or splenic artery to left renal artery bypasses.<sup>7</sup> The latter operations are elegantly simple and avoid cross clamping the aorta, which may produce adverse hemodynamic effects and myocardial ischemia in these patients who also frequently have diffuse atherosclerosis and coronary artery disease. We have even applied hepatorenal and splenorenal bypass to patients proposed as cardiac transplant candidates, if it appeared that their renal function and hypertension could be improved sufficiently to increase their potential for survival after transplantation.

Percutaneous transluminal angioplasty (PTA) of renal artery occlusive disease may also provide retrieval of renal function in selected patients.<sup>9</sup> However, PTA is not applicable to total occlusions or the renal arterial ostial lesions often found in patients with renal dysfunction. Stenoses of the renal ostia are generally extensions of severe aortic atherosclerosis, and are extremely dense and resistant to dilatation. Lesions of the branch renal arteries are also difficult to dilate successfully, and generally require extensive



in vivo or ex vivo reconstruction with preservation techniques. PTA can be recommended in patients who have high grade stenosis of the distal 2/3 of the main renal arteries, especially with non-atherosclerotic lesions such as fibromuscular dysplasia. The risk of morbidity and mortality of PTA is not less than that of surgical revascularization, and the long-term results with PTA are generally inferior to the results of surgical bypass.<sup>10</sup>

Although there are no prospective randomized trials comparing surgical revascularization and chronic hemodialysis, improved long-term survival and quality of life may be anticipated after successful retrieval of renal function by revascularization. Significant cost savings are also predicted, together with freedom from chronic hemodialysis and improvement or cure of renovascular hypertension.

### Summary

Renal dysfunction due to renal artery occlusive disease is potentially reversible and this diagnosis should be considered in all patients with renal failure, especially in patients with other manifestations of occlusive peripheral vascular disease, those with severe hypertension, and those over 45 or under 20 years of age at the onset of hypertension (i.e., older or younger than the usual age for onset of "essential" hypertension). Renovascular disease should also be suspected in hypertensive patients with mild to modest impairment of renal function who demonstrate a sudden worsening of renal function following administration of an angiotensin-converting enzyme inhibitor. Effective and safe techniques for renal revascularization are available in almost all cases to achieve greater longevity and improved quality of life, as well as to reduce the economic impact of chronic renal failure and renovascular hypertension.

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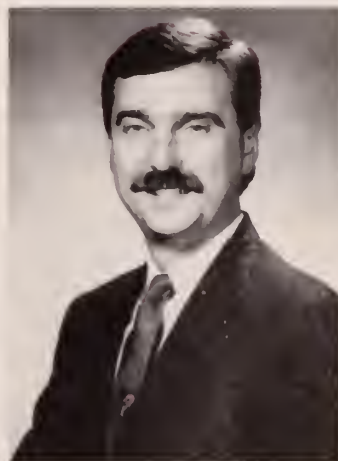
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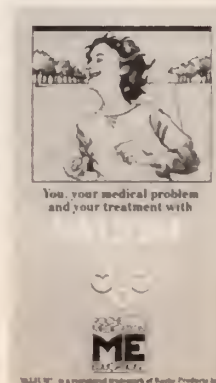
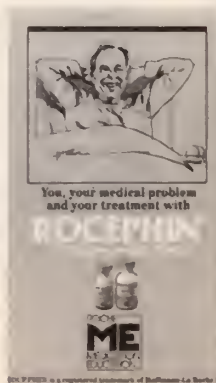
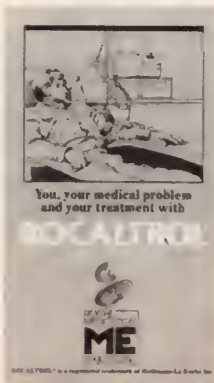
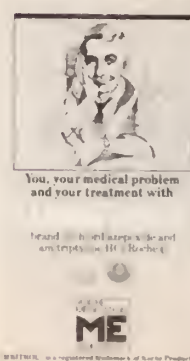
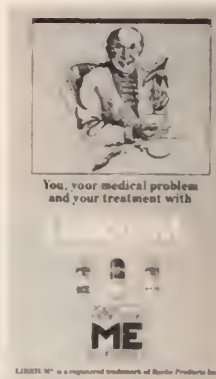
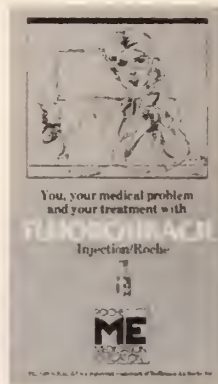
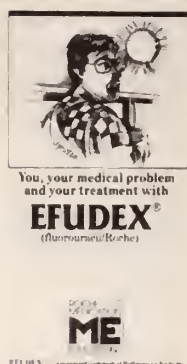
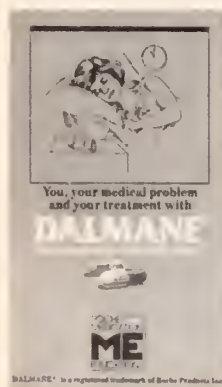
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# Mortality Rate Adjustment Among VA Hospitals

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WILLIAM H. ROGERS, Ph.D

Ludedale, Mississippi

Adjusted mortality rates continue to be published yearly by the Health Care Financing Administration (HCFA) and touted as a quality of care measure by the media.<sup>1,2</sup> Hospitals included in these analyses have been community and state or local public hospitals. Notably absent from these analyses are the Federal hospitals, eg. military, Veterans Administration (VA), and prison hospitals. Most beneficiaries attending Federal hospitals have little if any choice in where they receive medical care. A recent study identified lack of insurance as the most common reason veterans seek medical care at VA hospitals.<sup>3</sup> Federal hospitals have approximately two million admissions per year yet do not publicly release any quality of care information to the general public or their beneficiaries.<sup>4</sup> The 159 VA Medical Centers (VAMC) alone have over one million admissions and over 20 million outpatient visits each year.<sup>5</sup> In health care systems where beneficiaries have little if any choice of care, little is known about the quality of care the beneficiaries receive. This study developed a new mortality adjustment model to serve as a quality care screening instrument that would identify VAMCs that potentially have poor quality medical or surgical care.

## Background

Mortality adjustment models analyze patient outcome (mortality) as a screen for poor quality of care. Ideally, if mortality could be adjusted perfectly for diagnostic mix and severity of illness, the remaining un-

explained variance between expected mortality and observed mortality could be attributed to quality of care differences and statistical variance.<sup>6</sup> However, since the use of hospital claims data precludes redefined severity of illness adjustment, the unexplained variance in adjusted mortality rates among hospitals must be attributed to differences in residual severity of illness and quality of care.

Proxies for severity of illness available from claims data include the number of prior hospitalizations, source of admission (eg. emergency room (ER), nursing home, or acute care transfer), and the performance of a major operative procedure.<sup>7</sup> Most claims data include a list of secondary diagnoses present upon discharge. Although these cannot be completely separated from in-hospital complications, chronic diagnoses should provide a conservative estimate of comorbidity. These proxies for severity of illness and pre-admission comorbidity provide a means of adjusting for uncontrollable patient factors before using adjusted mortality rates as quality of care screen.

Patient death is a very crude quality of care outcome, but it can serve as an inexpensive screen for quality of care deficiencies. Dubois and Brook demonstrated that hospitals having a significantly higher death rate than expected.<sup>8</sup> It is not feasible to perform an intensive annual evaluation of the quality of care delivered at all hospitals. For large health care systems, some kind of screen is necessary and adjusted mortality has been found to be feasible one.

The VA recently developed a mortality adjustment model after that of HCFA<sup>9</sup> to guide quality assurance



efforts in the VA. In the last quarter of 1987, the VA used 1986 claims data in adjusting mortality rates for all of its 159 medical centers.<sup>10</sup> The VA added mean unadjusted mortality of diagnostic categories, race and length of stay as independent variables (predictors of death).

The VA's use of mean mortality and length of stay as predictors of death is problematic. Although length of stay may serve as a proxy for severity of illness, it may also be a proxy for inefficient and poor medical care; an electively admitted marginally-ill patient with an excessive length of stay would be interpreted as having a more severe illness. Inefficient and poor quality care could be masked by adjusting out length of stay differences among hospitals. Although excessive length of stay also increases the probability of observing a death, not allowing it into the adjustment model will increase the sensitivity of the screen in detecting poor quality care since an excessive length of stay is in itself poor medical care. The inclusion of mean mortality as a predictor of death uses death to predict death. This reduces the contribution of other independent variables to the model. The effect is that of comparing a hospital's death rate against the national average for any diagnosis rather than a death rate adjusted for independent variables such as comorbidities, prior hospitalizations, sex, and age. Lastly, the addition of race as an adjustment variable for death could mask possible discriminatory practices against minority veterans since there is no evidence to suggest that minorities should have a higher mortality independent of illness severity. Because of the many weaknesses of the current VA mortality adjustment model, the current study was begun to create a more valid and sensitive method of mortality adjustment.

## METHODS AND DATA ANALYSIS

### Methods

The eligible study population consisted of all veterans who were discharged from a VA facility between October 1, 1983 and September 30, 1984 (N=996,975). The study population consisted of admissions to all 159 VAMCs in the United States and Puerto Rico. The derivation of the final study group is depicted in Table 1. VAMCs vary tremendously in how they utilize their "intermediate care" facilities. Some VAMCs use intermediate care for the convalescent of severely ill or terminally ill patients having a high risk of death and other VAMCs use intermediate care for elective

Table 1 EXCLUSIONS FROM STUDY POPULATION

<u>Number of Admissions</u>	997,000
<u>Excluded</u>	469,000
Psychiatric	170,000 (18%)
Recurrent Medical	169,000 (17%)
Intrahospital Transfers	110,000 (11%)
Intermediate Care	20,000 ( 2%)
<u>Included</u>	528,000
First Medical	259,000 (27%)
All Surgical	269,000 (28%)

Numbers were rounded to the nearest thousand for presentation.

Percentages exceed 100% due to rounding.

evaluations which have a very low risk of death. Due to this inconsistent use of intermediate care facilities by VAMCs, all intermediate care admissions were excluded from the analysis. Patients admitted for psychiatric care uniformly have a very low risk of death and were, therefore, excluded from the analysis since mortality is not an appropriate quality of care screen for psychiatric facilities. Thus the study population consisted of all medical and surgical admissions to all VAMCs during fiscal year 1984.

A study of the VA's extensive computerized claims data revealed that the admitting diagnoses listed on the computerized data abstracts agreed with diagnosis listed by the physician in the medical record 99 percent of the time.<sup>11</sup> If this is indeed the case, selected VA claims data appear to be as accurate as that obtained through medical record review. This would lend credibility to the use of claims data in adjusting VA mortality rates.

The admitting diagnosis, as opposed to the diagnosis listed upon discharge, is theoretically less likely to reflect inpatient complications. For this reason admitting diagnosis was used in adjusting for diagnostic mix among VAMCs. Since fiscal year 1984 was the only complete year in which the admitting diagnosis was recorded and because DRGs (diagnosis-related groups) were not yet being used for reimbursement in the VA, this year was chosen for analysis.

The 1984 claims data includes the discharge clinical specialty (eg. General Medicine, Cardiology, General Surgery, and Psychiatry), up to ten comorbidities per admission, unique patient level identifiers, admitting diagnosis, primary diagnosis (the diagnosis



responsible for the largest portion of the hospitalization), sex, race, age, discharge status (alive or dead), geographical region of hospital code, up to five surgical procedures per admission, and source of admission (eg. nursing home, acute care transfer, or clinic/ER). The number of prior VA admissions is available through linkage of data sets over consecutive years.

Based on these available variables, a literature review was performed to help identify available variables or variable derivatives that yield an increased risk of death for hospitalized patients. The independent variables selected for use were 81 diagnostic categories homogeneous with respect to the risk of death, the number of comorbidities classified as mild and the number classified as severe, patients age in years, source of admission, the number of hospitalizations over the preceding 12 months, and whether a major operative procedure was performed for surgical patients.

The diagnostic categories were formed by first grouping all 3-digit ICD-9 codes into 17 broad clinical categories defined by the ICD-9 codes into 17 broad clinical categories defined by the ICD-9-CM manual, similar to those used by HCFA.<sup>12</sup> Two of the categories (obstetrics and pediatrics) were deleted since these categories are not treated at VAMCs. The remaining categories were then refined by subgrouping the ICD-9-CM codes into smaller categories. All 5-digit ICD-9-CM codes within each of the remaining 15 broad clinical categories were then further divided into 140 clinical groups with homogeneous unadjusted mortality rates. These 140 groups were then collapsed into 81 diagnostic categories (see Appendix 1) to provide an adequate number of admissions for regression analysis within each diagnostic category. To assure homogeneity with respect to unadjusted mortality rates, each category was analyzed using ANOVA and revised until homogeneous clinical categories were achieved. Thus 81 clinically meaningful and statistically homogeneous diagnostic categories were developed to adjust for diagnostic mix among the VAMCs.

Comorbidities were defined as those secondary diagnoses listed at discharge that represented chronic disease that would be unlikely to occur as in-hospital complications. From the master list of 81 diagnostic clusters, 43 diagnostic clusters were representative of chronic disease (see Appendix 2). The relative contribution of these secondary diagnoses to mortality was determined by regressing all 43 diagnoses on whether the patient was discharged alive or dead. All comorbidities that had a beta coefficient since they did not significantly contribute to death. Since the

point at which comorbidities go from mild to severe is arbitrary, we chose a point that would allow two-thirds of the diagnoses fall into the mild category and the remaining third fall into the severe category. Mild comorbidities were defined as those comorbidities having a beta coefficient greater than zero but less than 0.10. Severe comorbidities were defined as all comorbidities having a beta coefficient 0.10 or greater. In this way, 19 comorbidities were categorized as mild and 10 were categorized as severe (see Appendix 2).

Source of admission was defined as a transfer from a nursing home, transfer from another acute care hospital or admission from an outpatient department. Other than in hospital transfers to the Intensive Care Units, all transfers within the acute care facility were deleted from the analysis since no one service could be held accountable for the outcome of these admissions.

The number of prior hospitalizations was determined by linking the 1984 data set under study with the complete 1983 data set. Using the combined 1983 and 1984 data sets, VA hospitalizations were counted over 12 months prior to the current admission. The number of hospitalizations over the 12 months was derived for each admission.

To define major operative procedures, all surgical procedure ICD-9 codes performed at least 200 times when summed across all VA hospitals were reviewed. A major operative procedure was defined as a surgical procedure that, assuming excellent technical care, had a risk of death independent of the anesthetic risk. Three hundred and twenty-three ICD-9 codes were then reviewed independently by two physicians and an operating room nurse supervisor. Sixty-three procedures were selected as major operative procedures with over 90% agreement among the 3 reviewers.

For each continuous variable, its association with mean mortality was assessed using mortality and each dichotomous variable was assessed using 2x2 tables. The SAS Logist<sup>R</sup> procedure was used to generate a probability of death for each patient within each diagnostic cluster having a mortality rate greater than or equal to two percent.<sup>13</sup> Logist<sup>R</sup> is an interactive procedure that uses maximum likelihood estimates with the following model:  $P[Y=1|X=x] = 1 / (1 + \exp(-a_0 - xB))$ . For each diagnostic cluster with a mortality rate less than 2%, the SAS NLIN<sup>R</sup> procedure with the Gauss-Newton modified interactive method and functional derivatives was used since the Logist<sup>R</sup> procedure is not designed to perform well with rare outcomes.<sup>14</sup>

The SAS Logist<sup>R</sup> procedure was used to calculate



the probability of death for admissions in each of the 81 diagnostic clusters. The patient-level probabilities of death were then summed across all 81 diagnostic clusters for each hospital to determine the number of expected deaths per VAMC. We then compared the expected number of deaths to the observed number of deaths to determine outlier status. An outlier was defined as a VAMC with an observed mortality rate 2 or more standard deviations from the predicted mortality rate. Confidence intervals were calculated using the difference between the observed mortality rate and the predicated mortality rate. All VAMCs having an exceptionally low or high mortality rate were identified.

## Results

Preliminary analyses (Table 2) revealed that VAMCs treat a predominantly middle-aged non-service connected male population. Table 3 shows that few diagnostic categories that make up the majority of illnesses treated in the VA. The four most common illnesses are substance abuse, mental illness, cardiovascular disease, and cancer, respectively. Eight disease categories account for 80% of all deaths and 65% of all admissions.

The overall mortality rate for all admissions was 4.5 percent. The effect of comorbidity as estimated by secondary diagnoses on mortality was significant ( $p < 0.05$ ). Admissions having no comorbidity had a mortality rate of 1.44 percent while admissions with

Table 2. OVERVIEW OF VA HEALTH CARE SYSTEM

### Number of Medical Centers

Academically Affiliated:

13 Psychiatric VAMCs

96 Acute Care VAMCs

Unaffiliated:

13 Psychiatric VAMCs

37 Acute Care VAMCs

Total: 159 VAMCs\*

### Demographics of Hospital Admissions

Percent Male: 98%

Percent between 51-72 years: 65%

Service-Connected Admissions: 6%

### General Statistics

Admissions per year: 1,000,000

Overall mortality rate: 4.5%

\*Thirteen VAMCs have two hospitals (i.e. medical/surgical and psychiatric) for a total of 172 hospitals.

mild or severe comorbidities had a 2 to 12 fold increase in mortality respectively (Table 4). The source from which the patient was admitted was associated strongly with mortality. Admissions from a nursing home or another acute care facility were 4 and 2 times more likely to die than admissions from other sources (ie., clinics and emergency room), respectively. Admissions undergoing a major operative pro-

Table 3. MAJOR DISEASE CATEGORIES IN VA MEDICAL SYSTEM

65% of Admissions (N=966,975) 80% of Deaths			
ADMISSION DIAGNOSIS	% OF ADMITS	NUMBER OF DEATHS	MORTALITY RATE(%)
Heart/Circulatory Disease	13.8	8,273	6.2
Cancer	10.6	14,350	14.0
Mental Disease	10.4	1,508	1.5
Drug and Alcohol Disease	9.9	287	0.3
Lung Disease	6.8	4,471	6.8
Gastrointestinal Disease	6.7	2,786	4.3
Genitourinary Disease	5.1	1,184	2.4
Cerebrovascular Disease	2.2	1,872	8.8
Other Disease	34.6	8,699	2.6
<b>Total/Average</b>	<b>100.0</b>	<b>43,430</b>	<b>4.5</b>



Table 4. INDEPENDENT VARIABLES USED TO PREDICT MORTALITY

COMORBIDITY					
	Deaths	Total	Mortality Rate	Odds Ratio	95% CI
None	4533	314,812	1.44%	----	-----
Mild	6418	193,895	3.31%	2.41	2.32, 2.51
Severe	3347	19,745	16.95%	4.13	3.53, 4.83
SOURCE					
	Deaths	Total	Mortality Rate	Odds Ratio	95% CI
Outpatient					
Clinic	18,012	511,696	3.52%	-----	-----
Transfer	482	8,273	5.82%	1.70	1.55, 1.87
Nursing	1,164	8,482	13.72%	4.36	4.08, 4.64
Home					
MAJOR OPERATIVE PROCEDURE					
	Deaths	Total	Mortality Rate	Odds Ratio	95% CI
None	19,766	508,735	3.74%	-----	-----
≥1	1,266	17,113	7.40%	2.14	2.02, 2.27
PRIOR HOSPITALIZATIONS					
	Deaths	Total	Mortality Rate	Odds Ratio	95% CI
≤ 1	16,016	429,395	3.73%	-----	-----
≥ 2	3,862	99,106	3.90%	1.04	1.01, 1.08

cedure had more than twice the in-hospital mortality of all other admissions. Prior hospitalizations had only a weak effect on mortality. Admissions with fewer than 2 prior hospitalizations over the preceding 12 months had a mortality rate of 3.4 percent and those with 2 or more prior admissions had a mortality rate of 3.9 percent.

The model explained 11.9 percent of the variance in hospital mortality when mortality was adjusted for the 81 diagnostic clusters alone and 8.4 percent of the variance when mortality was adjusted for the other independent variables alone. The total amount of variance explained using the complete model was 16.4 percent. The model identified 19 VAMCs as high mortality outliers and 21 as low mortality outliers (Table 5); only 4 VAMCs should have been identified as high mortality outliers if the results were subject to random variation alone.

#### Comments

Our mortality adjustment model was able to explain 16.4 percent of the variation in mortality among all

admissions studied. Because no other studies have published the amount of overall variation explained by diagnostic mix and other independent variables, comparison to other models was not possible. Other studies using the last admission only (eg. HCFA and VA) should explain more variation because the amount of variation explained is a function of the mortality rate and patients are more likely to die during their last admission rather than their first. Using the last admission alone to adjust mortality may appropriately penalize hospitals prematurely discharging patients who are subsequently readmitted and die. However, all of these prematurely discharged patients may not return to the hospital of their previous admission or may not be hospitalized at the time of death. Also, using the last admission alone may penalize hospitals that provide good continuity of care and are more likely to receive the patient for his last admission. Hospitals that do not provide good continuity of care or to which the patient does not want to return would be falsely credited for a good outcome.

Other improvements of our model include 81 homogeneous diagnostic clusters with respect to death that



TABLE 5. HOSPITAL OUTLIERS

## LOW MORTALITY HOSPITAL OUTLIERS

VAMCs	Number of Obs/Pred			Confidence Intervals (95%)
	Patients	Ratio	Difference	
1.	1364	0.40	-1.85	[-2.95, -0.76]
2.	1859	0.45	-0.80	[-1.52, -0.17]
3.	1050	0.51	-1.38	[-2.62, -0.16]
4.	4219	0.54	-1.81	[-2.53, -1.07]
5.	5194	0.56	-1.22	[-1.78, -0.66]
6.	5078	0.61	-1.69	[-2.41, -0.98]
7.	2659	0.61	-1.07	[-1.86, -0.27]
8.	2335	0.62	-1.12	[-2.00, -0.25]
9.	2900	0.67	-1.30	[-2.22, -0.37]
10.	1878	0.67	-1.34	[-2.50, -0.19]
11.	3274	0.69	-1.18	[-2.03, -0.33]
12.	2541	0.69	-1.02	[-1.92, -0.12]
13.	5711	0.69	-0.83	[-1.39, -0.29]
14.	2967	0.69	-1.15	[-2.05, -0.26]
15.	2659	0.70	-1.23	[-2.22, -0.25]
16.	4931	0.71	-1.28	[-2.03, -0.52]
17.	3908	0.72	-1.01	[-1.77, -0.24]
18.	7266	0.72	-0.93	[-1.47, -0.39]
19.	8159	0.75	-0.70	[-1.17, -0.22]
20.	3684	0.76	-0.91	[-1.73, -0.10]
21.	4581	0.78	-0.75	[-1.45, -0.05]

## HIGH MORTALITY HOSPITAL OUTLIERS

VAMCs	Number of Obs/Pred			Confidence Intervals (95%)
	Patients	Ratio	Difference	
1.	1364	0.04	-1.85	[-2.95, -0.76]
2.	1859	0.45	-0.80	[-1.52, -0.17]
3.	1050	0.51	-1.38	[-2.62, -0.16]
4.	4219	0.54	-1.81	[-2.53, -1.07]
5.	5194	0.56	-1.22	[-1.78, -0.66]
6.	5078	0.61	-1.69	[-2.41, -0.98]
7.	2659	0.61	-1.07	[-1.86, -0.27]
8.	2335	0.62	-1.12	[-2.00, -0.25]
9.	2900	0.67	-1.30	[-2.22, -0.37]
10.	1878	0.67	-1.34	[-2.50, -0.19]
11.	3274	0.69	-1.18	[-2.03, -0.33]
12.	2541	0.69	-1.02	[-1.92, -0.12]
13.	5711	0.69	-0.83	[-1.39, -0.29]
14.	2967	0.69	-1.15	[-2.05, -0.26]
15.	2659	0.70	-1.23	[-2.22, -0.25]
16.	4931	0.71	-1.28	[-2.03, -0.52]
17.	3908	0.72	-1.01	[-1.77, -0.24]
18.	7266	0.72	-0.93	[-1.47, -0.39]
19.	8159	0.75	-0.70	[-1.17, -0.22]
20.	3684	0.76	-0.91	[-1.73, -0.10]
21.	4581	0.78	-0.75	[-1.45, -0.05]

maintain clinical integrity. VA and HCFA models adjusted for diagnostic mix using 16 broad diagnostic categories and the RAMI<sup>15</sup> method requires contingency tables. Using a larger number of diagnostic groups should provide better case-mix adjustment and allow better severity of illness adjustment.

Improvement over the current VA model includes absence of the length of stay and race adjustments. Length of stay adjustment may lessen the power to identify high mortality outliers that may also have inappropriately excessive lengths of stay. Adjusting for race could lessen the power of the model to identify poor quality of care in VAMCs having a relatively greater number of non-whites. Race adjustment would provide these VAMCs a lower chance of being identified as high mortality outliers even though no studies have shown that certain races should have higher mortality rates independent of quality of care or severity of illness.

The VA's 1986 mortality adjustment only identified 12 VAMCs as having overall high mortality compared to the 19 identified as high mortality outliers by our model.<sup>16</sup> Eleven of those identified by us were also found to be high mortality outliers in at least one of four areas by the VA's model. Their adjustment model should theoretically have less power to detect outliers and, therefore, should have identified fewer VAMCs as having exceptionally high overall mortality. The results of our analysis may not be completely comparable to the VA's 1986 analysis since the VA's mortality analysis was based on 1986 data and ours on 1984 data. Since veterans have relatively little control over where and from whom they receive their health care, the VA should implement a sensitive screening instrument. Our adjustment model should identify more VAMCs with potentially poor quality of care. In a health care system over which the beneficiaries have little control, it is up to the system to assure its beneficiaries that they are receiving good quality of care.

Using adjusted mortality rates to screen for poor quality of care within a single health care system leaves unanswered the question of whether the quality of care in the health care system is different from that in other health care systems. To date there is no study published or ongoing that compares the quality of care delivered in VAMCs, prison hospitals, or military hospitals to that delivered in other hospitals. If the quality of care delivered in VAMCs is higher than that delivered in non-federal hospitals, the identification of high mortality outliers may be less important. However, if the quality of care delivered in



VAMCs is worse than that in non-federal hospitals, comparing adjusted VAMC mortality rates to overall VAMC mortality weakens the ability to determine which VAMCs may be delivering substandard care.

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### Appendix 1. DIAGNOSTIC CLUSTERS

Diagnostic Cluster	Frequency	Mortality Rate (%)	Diagnostic Cluster	Frequency	Mortality Rate (%)
Enteritis	3872	1.01	Pneumonitis & Fibrosis	693	3.90
Sepsis	800	46.88	Abscess & Aspirate	757	38.10
Fungal & TB Infections	2838	3.70	Other Lung & Mediastinal Disease	3220	3.42
Viral & Other Infections	1914	1.31	Dental Disease	4378	0.11
Oral Cancer	3743	10.18	Upper Gastrointestinal Disease	15142	1.64
Gastrointestinal Cancer	2709	29.79	Cirrhosis	2844	20.25
Lung Cancer	12252	19.96	Hepatitis	2139	11.03
Bone Cancer	6447	2.22	Herniorrhaphy	19118	0.24
Genitourinary	12214	5.25	Intestinal Obstruction	2215	4.88
Other Cancer	842	5.46	Functional Gastrointestinal Disease	5206	0.60
Hematologic and Lymphatic Cancer	3011	9.73	Peritonitis	1758	3.30
Benign Neoplasia	8858	0.27	Peritoneal & Rectal	2910	2.37
Indeterminate Neoplasia	2589	2.24	Severe Gastrointestinal Disease	766	21.80
Endocrine Disease	13736	1.32	Cholecystectomy	4214	1.40
Nutritional Disease	1776	15.71	Acute Pancreatitis	1851	2.92
Metabolic Disease	2771	3.28	Other Gastrointestinal Hemorrhage	3167	7.58
Blood & Marrow Disease	3770	2.57	Other Pancreatic Disease	1460	1.85
Psychoses	4186	1.79	Other Renal Disease	977	1.84
Non-psychotic Mental Illness	4188	2.84	Chronic Renal Failure	1584	7.85
Substance Abuse	11501	0.71	Urologic Disease	41611	0.68
CNS Infection	422	10.90	Skin Disease	7125	0.45
CNS Degenerate Disease	4424	3.73	Connective Tissue Disease	33540	0.31
Severe CNS, Lung, & Renal Disease	1631	37.77	Orthopedics	21939	1.18
Paralysis	5286	1.87	Minor Trauma	5419	0.79
Neuropathies	5566	0.43	Major Trauma	1097	6.02
Eye Diseases	24114	0.09	Other Medical	26568	2.37
ENT Disease	4524	0.38	Other Surgical	1677	0.78
Chest Pain	5240	0.59	Other Neurologic	9850	0.93
Subendocardial MI	552	5.25	Aftercare	26344	0.59
Inferior MI	846	15.01	Decubitus Ulcer	2824	7.22
Other and Unspecified MI	2950	28.68	Cardiac Arrest	473	89.64
Chronic Heart Disease	27909	2.97	Intermediate Other Cancer	2573	15.04
Congestive Heart Failure	7688	10.76	High Risk Psychosis	2942	6.36
Stroke	3165	2.21	High Risk Angina	2093	1.86
Aneurysms & Peripheral Vsc. Disease	9683	3.06	High Risk Stroke	6475	11.51
Venous Disease Without Hemorrhage	7979	0.54	Transient Ischemic Attack	2903	0.55
Venous Disease with Hemorrhage	1006	0.49	Asthma	1926	0.73
Bronchitis	10417	0.76	Pleural Inflammatory Disease	1805	5.26
Pneumonia	8262	12.02	High Risk Renal Disease	242	9.01
Chronic Obstructive Lung Disease	11455	5.87	Colon Cancer	3642	12.16
			High Risk Other Cancer	2633	28.86



## Appendix 2. COMORBIDITIES

### A. Mild

Fungal & TB Disease  
Oral Cancer  
GU Cancer  
Hematologic & Lymphatic Cancer  
Indeterminate Cancer  
Disease of Blood & Marrow  
Psychoses  
Non-psychotic Mental Illness  
CNS Degenerative Disease  
Paralysis  
Chronic Heart Disease  
Aneurysms and Peripheral Vascular Disease  
Chronic Obstructive Lung Disease  
Other Lung & Mediastinal Disease  
Diseases of Peritoneum & Rectum  
Other Renal Disease  
Urologic Disease  
Other Medical Disease  
Decubitus Ulcer

### B. Severe

Gastrointestinal Cancer  
Lung Cancer  
Other Cancer  
Nutritional Deficit  
Congestive Heart Failure  
Venous Hemorrhage  
Pneumonitis & Fibrosis  
Cirrhosis  
Hepatitis  
Chronic Renal Failure

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## Physicians Recognition Award

Nine MSMA members were named recipients of the AMA Physicians' Recognition Award in January and February, 1991. This award is presented by the American Medical Association to Physicians who have voluntarily completed a minimum of 50 hours of continuing education within a one-year period. Physicians can receive the PRA certificate valid for one, two, or three years. For a one-year award, physicians report 50 hours of continuing medical education, including 20 hours of Category 1; for the two-year award, physicians report 100 hours CME, including 40 hours, of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1. These nine individuals are presented below by medical society.

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James Powers Wood, MD

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**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon<sup>®</sup> is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.<sup>1,2</sup> Also dizziness, headache, skin flushing reported when used orally.<sup>1,3</sup>

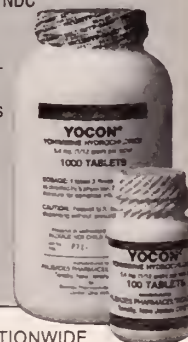
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.<sup>1,3,4</sup> 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.<sup>3</sup>

**How Supplied:** Oral tablets of Yocon<sup>®</sup> 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

#### References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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## The President's Page

J. ELMER NIX, MD

### "Criminality"

When I was growing up, I often heard my father say, "Anyone who likes good legislation and good sausage, should never watch either being made." Over the years I have developed a better understanding of that statement. I have had the opportunity to watch some good and some bad legislation being made ••• and the process of getting a bill through the Legislature is not always a pretty one to watch. Today, I am most concerned about a bill (a bad piece of legislation) that has made it through the legislative-executive-legislative process and is scheduled to go into effect on 1 July 1991. I refer to HB 982, commonly referred to as the "Abortion Bill".

I have my personal feelings about abortion just as each of you do, and those will not be discussed in this article. The bad thing about HB 982 is not strictly related to abortions. The bad thing is that the Mississippi Legislature has now deemed it a criminal act for a doctor to fail to provide certain information to a patient. There has always been a civil penalty for a doctor failing to provide appropriate medical information to a patient ••• that is called "getting an informed consent". We are all very familiar with informed consent.

House Bill 982 states in part, the following:

Section 2. Except in the case of a medical emergency, consent to an abortion is voluntary and informed, if and only if:

(b) The woman is informed, by the physician (appears to refer to either the Ob-Gyn or the referring M.D.) or his agent at least twenty-four (24) hours before the abortion:

(i) That medical assistance benefits may be available for prenatal care, childbirth and neonatal care;

(ii) That the father is liable to assist in the support of her child, even in instances in which the father has offered to pay for the abortion; and

(iii) That she has the right to review the printed materials described in Section 3 of this act ( to be developed by the State Department of Health).

*(Continued on page 137)*



## "Washington Visit"

While attending a legislative workshop for the American Academy of Otolaryngology-Head and Neck Surgery in Washington, DC, I immediately became aware of three significant facts relating to the current health scene in the Capital. The first significant feature is the "Alphabet Jungle" atmosphere dominant in that setting. At the very first presentation, I immediately realized I was in trouble when each and every presentation contained numerous acronyms. At the last count, I had recorded some 42 acronyms used by government staffers and legislative consultants, after that I stopped counting. Not being prepared for this was a significant disadvantage, as those giving the presentations made no efforts to explain in detail what they were saying and displayed little patience for those of us who were illiterate in the abusive use of acronyms.

The second significant observation was the absolute obsession with "access to health care". This was the primary concern and initial topic of discussions with every congressional aid and government staffer with whom I talked. It became obvious that this would be the primary subject for any action in the health care field this year. It is conceived by that group of people that every citizen deserves and desires accessible, affordable, quality health care. On this topic the AMA, in its proposal to improve access to affordable quality health care, is committed to a National dialogue and negotiations relative to this critical issue. The proposal centers around preserving the strengths of the current health care delivery system, availability regardless of income, continued access for the elderly, and continued high-quality services with patients retaining the freedom of choice in accessing the system.

The third and probably most significant issue in the Congressional arena is the "Budget Neutral" concept now active in Congress. Each segment of the budget has to be neutral. Any increase in one area has to be offset by decreases in the budget of the same program. The health care legislative arena is isolated in a budget segment of its own and, therefore, any increases in any single area relative to health care has to be off-set by an

equal decrease in other areas within the health care arena. This forces Congress to abruptly confront the effects of decreases in other areas of the budget whenever a proposal is made to increase any single area.

During and after this visit to Washington, I was impressed with the above observations. If we, as physicians, become involved with the legislative scene we must be prepared to do so on their terms. It was also obvious that any single, small group would have little impact in bringing about any changes. This accentuated the need for a concerted effort by organized medicine rather than individual group efforts.

Myron W. Lockey, MD  
Editor

## Presidents's Page

*(Continued from page 136)*

(c) The availability of services provided by public and private agencies which provide pregnancy prevention counseling and medical referrals for obtaining pregnancy prevention medications or devices.

Section 5. Anyone who purposefully, knowingly or recklessly performs or attempts to perform or induce an abortion without complying with this act shall, upon conviction, be guilty of a misdemeanor and shall be punished by a fine of One Thousand Dollars (\$1,000.00), by imprisonment in the county jail for a period of time not to exceed six (6) months or both such time and imprisonment.

Physicians do have an obligation to present medical facts accurately to the patient or her agent and to make recommendations for management in accordance with good medical practice. However, I do not feel that physicians should be responsible for explaining the legal liabilities of a father in such cases as these, nor should we be responsible for advising the patient of all



social services that may be available. Physicians are physicians, not social service counselors or lawyers. Another very dangerous precedent is established in this legislation when it imposes criminal liability on any physician who fails to provide information set forth in the bill when obtaining consent to the procedure. Adding this criminal liability on top of the existing civil liability is an enormous expansion of the physician's liability for failing to obtain proper informed consent.

I am not taking any particular position on the abortion issue. I am, however, very firm in my conviction that physicians should not be fined or sent to jail for failure to provide legal and social services information to patients. As currently written, this piece of legislation (HB 982) is a bad piece of legislation. Perhaps I should stop eating sausage also.

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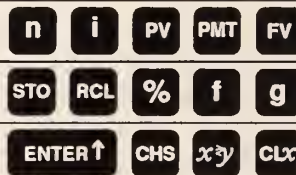
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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **-SPECIAL BULLETIN-**

### **Gifts to Physicians From Industry**

The Council on Ethical and Judicial Affairs of the American Medical Association has issued its opinion on gifts to physicians from industry. After a year of deliberations, the opinion was formed and has been incorporated into the AMA's code of ethics.

Physicians should follow these guidelines to avoid accepting inappropriate gifts:

- Any gifts accepted physicians individually should primarily entail a benefit to patients and should not be of substantial value. Textbooks, modest meals and other gifts are appropriate if they serve a genuine educational function. Cash payments should not be accepted.
- Individual gifts of minimal value are permitted as long as the gifts relate to the physician's work (e.g., pens and notepads).
- Subsidies to underwrite costs of continuing medical education or professional meetings can contribute to the improvement of patient care and therefore, are permitted. Since giving a subsidy directly to a physician by a company sales representative may create a relationship that could influence the use of the company's products, any subsidy should be accepted by the conference sponsor, who can use the money to reduce the registration fee. Payments to defray the costs of a conference should not be accepted directly from the company by physicians who are attending the conference.
- Subsidies from industry should not be accepted directly or indirectly to pay for the costs of travel, lodging or other personal expenses of physicians attending conferences or meetings, nor should subsidies be accepted to compensate for the physicians' time. Subsidies for hospitality should not be accepted outside of modest meals or social events that are held as part of a conference or meeting. Faculty at conferences or meetings can accept reasonable honoraria and may accept reimbursement for reasonable travel, lodging and meal expenses. It also is appropriate for consultants who provide genuine services to receive reasonable compensation for reasonable travel, lodging and meal expenses. Token consulting or advisory arrangements cannot be used to justify the compensation of physicians for their time or their travel lodging and other out-of-pocket expenses.
- Scholarship or other special funds to permit medical students, residents and fellows to attend carefully selected educational conferences may be permitted as long as the selection of students, residents or fellows who will receive funds is made by the academic or training institution.
- No gifts should be accepted if there are strings attached. For example, physicians should not accept gifts if they are given in relation to the physician's prescribing practices. In addition, when companies underwrite medical conferences or lectures other than their own, responsibility for and control over the selection of content, faculty, educational methods and materials should belong to the organizers of the conferences or lectures.



# Special Article

## OFFICIAL CALL

### To All Members of the Mississippi State Medical Association

The 123rd Annual Session of the Mississippi State Medical Association is called to meet in Biloxi, Mississippi on Wednesday, May 15, 1991, pursuant to Article V of the Constitution. The House of Delegates will be convened at the Royal d'Iberville Hotel at 9:00 a.m. on May 16.

The Scientific Assembly will meet May 17 and May 18.

No member or guest will be permitted to participate in any aspect of the Annual Session until regularly registered.

J. Elmer Nix, MD  
President

Don Q. Mitchell, MD  
Secretary-Treasurer

### 123rd Annual Session Royal d'Iberville Biloxi

MSMA 123rd Annual Session will be held at the Royal d'Iberville Hotel in Biloxi, Mississippi, Wednesday, May 15 thru Sunday, May 19, 1991. Individual room reservations should be made directly with the Royal d'Iberville. A room registration form was enclosed in the March Blue Sheet.

The annual President's Reception will be held, Thursday, May 16, at 6:00 p.m. on the lawn of Beauvoir, Jefferson Davis' historic home. The MSMA/MSMAA Membership Party will be held, Saturday, May 18, at 6:00 p.m. in the Royal d'Iberville and will feature outstanding entertainment.

### House of Delegates

The opening session of the House of Delegates will convene on Thursday, May 16 at 9:00 a.m.

Special guest speaker will be Dr. C. John Tupper, president of the American Medical Association. Delegates will hear an address by Dr. Elmer J. Nix, MSMA president.

Reports and resolutions will be introduced at the initial meeting of the House, for consideration by Reference Committees which are set to meet on Thursday and Friday afternoons. The MSMA 1990 Community Service and other awards will also be presented during the opening session.

Delegates will reconvene on Sunday morning, May 19, to take action on policy recommendations and to elect MSMA officers for 1991-92. The installation of Dr. James C. Waites of Laurel as MSMA president for 1991-92 will mark the official conclusion of the 123rd Annual Session.

### HMSS/YPS Joint Meeting

A joint meeting of MSMA's Hospital Medical Staff Section (HMSS) and Young Physicians Section (YPS) will take place on Thursday, May 16, at 2:00 p.m. The program will include Dr. Louis J. Goodman, Director of Medical Economics from the Texas Medical Association addressing "The Medicare Resource Based Relative Value Scale - An Update". At the conclusion of Dr. Goodman's remarks, there will be a discussion about the RBRVS by William L. Lotterhos, MD and Martha Bennett, of Traveler's Medicare.

A "Washington Legislative Update" will be presented by AMA Department of Congressional Relations Director, Scott Wilber.

Following these presentations the HMSS and YPS will meet separately for their individual business sessions.



## Scientific Program

The Medicine and Surgery Plenary Sessions are Scheduled for May 17 and May 18. Program information is outlined on page 142 of this issue of *Journal MSMA*. CME accreditation for the plenary sessions has been applied for and will be published in the official program.

## Workshops

The 123rd Annual Session program includes two workshops of special interest. Members and spouses are invited to attend a workshop on "Estate Planning Through a Charitable Foundation" conducted by Mr. Rick Potter of The Planning Group from Houston, Texas on Friday afternoon, May 17.

Medical Assurance Company of Mississippi will have a Pediatric Risk Management video tape seminar session, Saturday, May 18, beginning at 8:30 a.m.

## Technical Exhibits

This year's Technical Exhibit features 65 displays of the latest in resources for physicians. The program includes two breakfasts and one luncheon in the exhibit hall. This was planned to provide MSMA members with additional opportunities to view the exhibits and talk with the professional representatives who will be available to provide information. Members are eligible for numerous exhibit registration awards.

## MSMA Auxiliary

The MSMA Auxiliary will be conducting their 68th Annual Session during the week. Complete program information is on page 145 of this issue. The program for the MSMA Auxiliary annual session also includes a tea honoring Mrs. Roberta Barnett, president of Southern Medical Association Auxiliary.

MSMA and MSMA Auxiliary members will again have the opportunity to enjoy coffee, soft drinks, and homemade refreshments in the Auxiliary's Hospitality Center.

# 123rd Annual Session

## Summary of Events

### Wednesday, May 15

Golf Tournament  
Tennis Tournament

### Thursday, May 16

Continental Breakfast - Exhibit Hall  
House of Delegates  
American Society of Addiction Medicine  
MS Foundation for Medical Care  
HMSS/YPS Joint Meeting  
Reference Committee  
President's Reception - Beauvoir

### Friday, May 17

Continental Breakfast - Exhibit Hall  
Medicine Plenary Session  
MSMA Auxiliary House of Delegates  
MS Academy of Family Physicians  
MS Society of Internal Medicine  
MS Psychiatric Association  
American Academy of Pediatrics  
Workshop "Estate Planning Through a Charitable Foundation"  
Reference Committee Meeting  
Medical Alumni Functions

### Saturday, May 18

Surgery Plenary Session  
Fifty-Year Club  
MACM -- Risk Management Video Tape Seminar  
MSMA Auxiliary Workshop  
MS Chapter, American College of Surgeons  
MS Society of Anesthesiologists  
MS Dermatological Society  
MS Association of Pathologists  
MSMA/MSMAA Membership Party

### Sunday, May 19

Catholic Services  
Protestant Services  
House of Delegates



# SCIENTIFIC PROGRAMS

## 123rd Annual Session

Friday, May 17, 1991  
Medicine Plenary Session

### Recent Advances in Medicine

- 8:00 a.m.      *"New Drugs 1991"*  
Tom Frank, MD, Jonesboro, AR
- 9:00 a.m.      Update on STD's  
*"Sexually Transmitted Diseases in the 90's"*  
Ed Thompson, MD, Jackson, MS  
*"Management of the Patient With Aids"*  
Bill Causey, MD, Jackson, MS
- 10:15 a.m.     *"Advances in Interventional Radiology"*  
James U. Morano, MD, Jackson
- 11:15 a.m.     *"New Developments in Pediatric Emergency Care"*  
Emily S. Pender, MD, Jackson

Saturday, May 18, 1991  
Surgery Plenary Session

### Ambulatory Surgery: Present Status & Future Considerations

- 8:00 a.m.      Introduction  
Robert S. Rhodes, MD, Jackson
- 8:15 a.m.      *"Ambulatory Anesthesia"*  
John H. Eichhorn, MD, Jackson
- 9:00 a.m.      *"Local/Regional Anesthesia: Techniques and Toxicity"*
- 9:15 a.m.      *"Special Consideration in the Pediatric Patient"*  
Richard S. Miller, MD, Jackson
- 9:35 a.m.      *"Special Consideration in the Geriatric Patient"*  
Galen V. Poole, MD, Jackson
- 9:55 a.m.      *"The Role of Quality Assurance"*  
Kenneth Mattox, MD, Houston, TX
- 10:40 a.m.     *"The Mississippi PRO Perspective"*  
Tom Fenter, MD, Jackson
- 11:05 a.m.     *"Reimbursement Consideration"*  
T. E. Stevens, MD, Jackson
- 11:30 a.m.     Panel Discussion  
Robert S. Rhodes, MD, Moderator



# Visit the Technical Exhibitors at MSMA's 123rd Annual Session

Royal d'Iberville Hotel  
Biloxi, MS  
May 15-17, 1991

Exhibitor	Booth	Exhibitor	Booth
Abbott Laboratories	9, 30	Miles, Inc.	59
Agape Data Systems	62	Miles, Inc., Diagnostics Division	63
Andgate Technology, Inc.	51	MS Baptist Chemical Dependency Center	57
Automated Health Systems, Inc.	20	MS Cattle Industry Board	32
BFI Medical Waste Systems	37	MS Foundation for Medical Care	35
Bedsole Surgical Supply	47, 48, 49, 50	MS Impression Products	61
BESCO Office Products	64, 65	MS Methodist Rehabilitation Center	60
CSC Health Care Systems	14	MS Physicians Insurance Company	39
Charter Hospital of Jackson	24	MS State Department of Health	6
CIBA Pharmaceutical Company	55	MSMA Benefit Plan and Trust	43
Circadian	22	MSMA-Sponsored Retirement Income Program	40
Cothorn Computer Systems, Inc.	23	Parke-Davis	12
DP Associates, Inc.	29	Pine Grove	38
Emerson, Stokes, Elliot, & Harper, CPAs	10	Professional Nursing Services	16
Encyclopedia Britannica USA	52	Puckett Laboratory	36
Geigy Pharmaceuticals	45	Roche Labs	17
Genentech, Inc.	8	Salcris Systems, Inc.	1
Glaxo, Inc.	7	Sandoz Pharmaceuticals	34
Healthcare Suppliers, Inc.	26	Schering Corporation	54
I.C. Systems	53	Sims Prosthetics	2
Independent Computer Service	58	Southern Medical Association	5
Insurance Corporation of America	19	Summit Pharmaceuticals	18
Jackson Recovery Center	4	The Doctors' Company	3
Janssen Pharmaceutica	46	The Trusty Company, Inc.	41
Key Pharmaceuticals	13	The Upjohn Company	28
Knoll Pharmaceuticals	21	Travelers Medicare	27
Lanier Voice Products	56	U.S. Army Medical Department	15
Medical Assurance Company of MS	44	Weight Watchers	33
Medical Pathology Laboratory, Ltd.	25	Wimbish, Jon B. and Associates	42
Merck Sharp & Dohme	11	Wyeth-Ayerst Labs	31



## SPECIAL ACTIVITIES

### MSMA Tennis Tournament

This exciting and fun filled tournament is held in conjunction with the annual session and is sponsored this year by

### MSMA Diversified Services, Inc.

When: 1:00 pm Wednesday,  
May 15, 1991  
Where: Gulfport Racquet Club,  
Gulfport, MS, rated "4-Star"  
by World Tennis Magazine.  
(Non-Tennis parties may have  
use of all available club  
facilities.)  
Who: MSMA members, their  
families, exhibitors, and their  
families are all eligible  
participants  
How: Registration form in April  
MSMA Report.

### MSMA Golf Tournament

sponsored by

### Medical Assurance Company of Mississippi

and

### Montgomery, Smith-Vaniz & McGraw Attorneys at Law

When: 1:00 pm Wednesday, May 15,  
1991  
Where: Windance Country Club,  
Gulfport  
Who: Everybody  
Fee: \$35.00  
How: Registration form in April  
MSMA Report

### MSMA Fishing Rodeo

When: 7:00 am , Friday and Saturday,  
May 17 & 18, 1991  
Where: Broadwater Marina - slip 24  
Fee: \$75.00 per person  
How: Registration form in April  
MSMA Report.  
"Best Catch Prizes Awarded"

### University of Mississippi Medical Alumni

The University of Mississippi Medical Alumni Chapter  
cordially invites you to a cocktail buffet,  
Friday, May 17, 1991, 7:00 p.m. - 9:00 p.m.  
at the Walter Anderson Museum, Ocean Springs,  
cost \$20.00 per person.

The Medical Alumni Annual Meeting will be held Saturday, May 18, 7:30 a.m. in the Royal d'Iberville Hotel. The Alumni meeting will include: Update on UMC by Vice Chancellor Norman C. Nelson; Update on the Medical Alumni Chapter by Nancy C. Burrow, MD and "Student and Teacher of the Year" Awards will be announced.

Please contact the office of Alumni Affairs for further information.



# Mississippi State Medical Association Auxiliary

## ACTIVITIES CALENDAR

### Wednesday, May 15

3:00 pm - 5:00 pm

Registration

### Thursday, May 16

9:00 am - 5:00 pm

9:00 am

9:00 am

11:00 am

3:00 pm - 4:30 pm

6:00 pm

Registration

Hospitality Center

MSMA House of Delegates

Preconvention Board Meeting

*Dutch Luncheon*

Tea Honoring -- Mrs. Roberta Barnett

President's Reception

### Friday, May 17

8:00 am - noon

8:45 am

9:00 am

9:00 am

12:00 noon

2:30 pm

6:00 pm

Registration

Continental Breakfast

Hospitality Center

Auxiliary House of Delegates

Auxiliary Luncheon

Postconvention Board Meeting

Alumni Functions

### Saturday, May 18

8:30 am

10:30 am

12:00 noon

6:00 pm

Past President's Breakfast

Workshop - "Mississippi Artist Past and Present"

Luncheon - National Delegates & Pages

MSMA/MSMA Auxiliary Party

### Sunday, May 19

7:30 am

8:00 am

9:00 am

Continental Breakfast

Catholic Services

Protestant Services

MSMA House of Delegates



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## New Members

**Allen, Cynthia A.,** Jackson. Born Jackson, MS, October 16, 1956; MD, University of Mississippi School of Medicine, Jackson, MS, 1986; interned and family medicine residency University Medical Center, Jackson, MS 1986-89; elected by Central Medical Society.

**Ballentine, Michael S.,** Clarksdale. Born Kansas City, KA, March 30, 1953; DO, University of Health Sciences College of Osteopathic Medicine, Kansas City, MO 1981; interned ob-gyn residency Fitzsimmons Army Medical Center, Aurora CO, 1984-88; elected by Clarksdale & Six Counties.

**Blevins, Phillip K.,** Jackson. Born Kentucky, March 30, 1942; MD, University of Kentucky School of Medicine, Louisville, KY 1967; interned one year University Hospital, Lexington, KY; general surgery residency, Boston City Hospital Harvard Surgical Center, Boston, MA 1968-75; plastic surgery, University Medical Center, Jackson, MS, 1975-77; elected by Central Medical Society.

**Block, William A.,** Smithville. Born Chicago, IL, Nov. 14, 1944; MD, University of Colorado School of Medicine, Denver, CO. 1971; interned one year University of South Carolina, Columbia, SC; pathology residency University of Colorado Medical School, Denver, CO, 1972-74 & Navy Hospital, San Diego, CA 1974-76; elected by Northeast MS Medical Society.

**Corbett, James J.,** Jackson. Born Chicago, IL, July 2, 1940; MD, Chicago Medical School, Chicago, IL, 1986; medicine residency Rhode Island Hospital, Providence, RI, 1966-68; neurology residency University Hospital, Cleveland, OH, 1968-71; elected by Central Medical Society.

**Connor, Gregory S.,** Hattiesburg. Born Kansas, Oct. 27, 1958; MD, University of Oklahoma College of Medicine, Oklahoma City, OK 1984; interned one year George Washington University Hospital, Washington, DC; neurology residency Mayo Clinic, Rochester, MN, 1986-89; elected by South MS Medical Society.

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## New Members/ Continued

**Cook, James Joseph**, Oxford. Born Detroit, MI, Jan. 28, 1959; MD, University of Mississippi School of Medicine, Jackson, MS 1985; interned same one year; anesthesiology residency University of Florida College of Medicine, Gainesville, FL, 1986-89; elected by North MS Medical Society.

**Dale, Isaac F.**, Ocean Springs. Born Jefferson, LA, Sept. 27, 1955; MD, Tulane University School of Medicine, New Orleans, LA, 1981; interned and general surgery residency Tulane Affiliated Hospitals, New Orleans, 1981-83; emergency medicine residency, Charity Hospital, New Orleans, LA, 1983-85; elected by Coast Counties Medical Society.

**Dorman, Nancy J.**, Jackson. Born Niles, MI, Jan. 29, 1953; MD, Ohio State University College of Medicine, Columbus, OH 1983; interned one year North Eastern Ohio Universities Affiliated Hospital, Canton, OH; medicine residency and infectious disease fellowship, Wayne State University School of Medicine, Detroit, MI, 1984-1990; elected by Central Medical Society.

**Fowler, Jackson E., Jr**, Jackson. Born Schenectady, NY, Oct. 17, 1945; MD, University of Virginia School of Medicine, Charlottesville, VA, 1971; interned University of Pennsylvania Hospital, Philadelphia, PA one year; surgery residency, same, one year; urology residency Stanford University Hospital, Stanford, CA, 1973-77; elected by Central Medical Society.

**Harris, Paul J.**, Ocean Springs. Born New Rochelle, NY, Oct. 24, 1954; MD, Emory University School of Medicine, Atlanta, GA 1979; interned and medicine residency University Medical Center, Jackson, MS, 1979-82; anesthesiology residency, same, 1986-88; elected by Coast Counties Medical Society.

**Lucas, Willie**, Greenville. Born Mississippi, Dec. 24, 1936; MD, Tufts University School of Medicine, Boston, MA, 1972; interned Boston City Hospital, Boston, MA one year; internal medicine residency Hubbard Meharry Hospital, Nashville, TN; elected by Delta Medical Society.

**O'Neal, Michael R.**, Purvis. Born Hattiesburg, MS, Nov. 8, 1948; MD, University of Mississippi School of Medicine, Jackson, MS, 1974; interned and family medicine residency University of Miami Medical School, Miami, FL, 1974-77; elected by South MS Medical Society.

**Phan, Hien V.**, Laurel. Born Cambodia, May 15, 1944; MD, Grall Hospital, Saigon, Vietnam 1972; pediatric training St Agnes Hospital, Baltimore, MD, 1979-80 and Polyclinic Medical Center, Harrisburg, PA, 1980-82; anesthesiology training Medical Center, Brooklyn, NY 1984-86 and pediatric anesthesiology fellowship Akron Childrens Hospital, Akron, OH, 1986-87; elected by South MS Medical Society.

**Polk, Jo Lynn**, Jackson. Born Chattanooga, TN, Oct. 24, 1951; MD, University of Mississippi School of Medicine, Jackson, MS, 1979; interned one year Howard University Hospital, Washington, DC; physical medicine & rehabilitation residency University of Colorado Health Sciences Center, Denver, CO, 1981-84; elected by Central Medical Society.

**Smithson, David N.**, Biloxi. Born Oklahoma City, OK Feb 17, 1953; MD, University of Oklahoma College of Medicine, Oklahoma City, OK 1980; interned Baptist Memorial Hospital, Memphis, TN 1980-81; medicine residency University of Oklahoma-Tulsa, OK 1987-89, and non-invasive cardiology fellowship 1989-90; elected by Coast Counties Medical Society.

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## New Members/ Continued

**Webb, Mark C.**, Jackson. Born Jackson, MS, Sept 29, 1959; MD, Tulane University School of Medicine, New Orleans, LA 1986; interned and psychiatry residency Duke University School of Medicine, Durham, NC 1986-90; elected by Central Medical Society.

**Webster, Stevan A.**, Laurel. Born Monroe, IN, May 2, 1951; MD, Indiana University School of Medicine, Indianapolis, IN 1977; residency internal medicine Tulane University Affiliated Hospitals, New Orleans, LA 1977-80; residency in cardiovascular diseases, University of Texas Medical School, San Antonio, TX 1980-82; elected by South MS Medical Society.

**Wheat, David B.**, Jackson. Born Stuggart, AK, Feb. 19, 1952; MD, University of Mississippi School of Medicine, Jackson, MS, 1980; interned and family medicine residency University of Alabama School of Medicine-Anniston, AL 1980-83; elected by Central Medical Society.

**Woodall, Ronald E.**, Hattiesburg. Born Gulfport, MS; MD, University of Mississippi School of Medicine, Jackson, MS, 1980; interned and medicine residency Tulane University Hospitals, New Orleans, LA 1980-83; cardiology residency, Same, 1983-elected by South MS Medical Society.

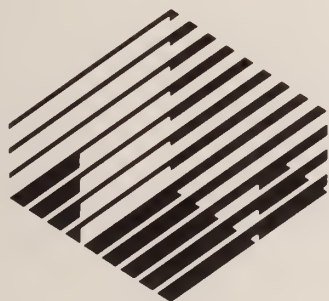
**Yates, Anne Bridges**, Jackson. Born Oxford, MS, June 3, 1958; MD, University of Mississippi School of Medicine, Jackson, MS 1984; interned and pediatric residency University Medical Center, Jackson, MS 1984-88; allergy/immunology residency, Baylor College of Medicine, Houston, TX 1988-90; elected by Central Medical Society.

REINSTATED - **Holston, James M.**, Laurel, MS.

## Deaths

**Langford, Herbert G.**, Jackson. Born Columbia, SC, April 22, 1922; MD, Medical College of Virginia, Richmond, VA 1945; interned one year Philadelphia General Hospital, Philadelphia, PA; internal medicine residency Medical College of Virginia and Johns Hopkins, 1948-52; died Jan 26, 1991, age 68.

**Lynch, Robert H F**, Rolling Fork. Born Delay, MS, April 21, 1920; MD, University of Tennessee College of Medicine, Memphis, TN, 1945; interned one year St Joseph Hospital, Memphis, TN; died Feb 25, 1991, age 70.



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## Personals

**G. A. Adcock and H. S. Pace** of Biloxi announce the relocation of their Ear, Nose & Throat practice to the new wing of the Coastal Medical Center, Suite 201, 180-B Debuys Road, Biloxi.

**Donald W. Benefield** of Gulfport has been appointed to the rank of clinical instructor for the Department of Ophthalmology at Tulane University Medical Center.

**William E. Bowlus** of Brandon was recently appointed to the Board of Directors of River Oaks Hospital in Jackson.

**James J. Corbett** of Iowa has been named professor of neurology and chairman of the Department of Neurology in the School of Medicine at the University of Mississippi Medical Center.

**Donald F. Dohn** of Florida has returned to active membership on the Singing River Medical Staff.

**Frank Garbin** of Lumberton has joined the staff of the Magnolia Clinic in Magnolia, MS.

**Richard G. Hendrick** has associated with the Internal Medicine Associates of Tupelo, Ltd. for the practice of internal medicine.

**Frank S. Hill, Jr.** has associated with Kings Daughters Hospital, Gamble Brothers and Archer Clinic, Greenville, in the practice of radiology.

**A. Gene Hutcheson** of Brookhaven announces the re-location of his office for the practice of internal medicine to 1010 Brookman Drive, Brookhaven.

**James L. Holzhauer** announces the relocation of his practice to 2461 5th Street North, Columbus.

**David H. Irwin, Jr.** of Tupelo has been named an Alumni Fellow for 1991 by Mississippi State Univer-

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VASOTEC is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor. A diminished antihypertensive effect toward the end of the dosing interval can occur in some patients.

For a Brief Summary of Prescribing Information, please see the last page of this advertisement.

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# VASOTEC

(ENALAPRIL MALEATE) MSD

VASOTEC is available in 2.5-mg, 5-mg, 10-mg, and 20-mg tablet strengths.

**Contraindications:** VASOTEC\* (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

**Warnings: Angioedema:** Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and appropriate therapy and monitoring should be provided until complete and sustained resolution of signs and symptoms has occurred. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL) and/or measures necessary to ensure a patent airway, should be promptly provided.** (See ADVERSE REACTIONS.)

**Hypotension:** Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Patients with heart failure given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed. Caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in patients with heart failure), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, Drug Interactions and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident.

If excessive hypotension occurs, the patient should be placed in the supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

**Neutropenia/Agranulocytosis:** Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

**Fetal/Neonatal Morbidity and Mortality:** ACE inhibitors, including VASOTEC, can cause fetal and neonatal morbidity and mortality when administered to pregnant women.

Enalapril crosses the human placenta. When ACE inhibitors have been used during the second and third trimesters of pregnancy, there have been reports of hypotension, renal failure, skull hypoplasia, and/or death in the newborn. Oligohydramnios has also been reported, presumably representing decreased renal function in the fetus. Limb contractures, craniofacial deformities, hypoplastic lung development and intrauterine growth retardation have been reported in association with oligohydramnios. Patients who do require ACE inhibitors during the second and third trimesters of pregnancy should be apprised of the potential hazards to the fetus, and frequent ultrasound examinations should be performed to look for oligohydramnios. If oligohydramnios is observed, VASOTEC should be discontinued unless it is considered life-saving for the mother.

Other potential risks to the fetus/neonate exposed to ACE inhibitors include: intrauterine growth retardation, prematurity, patent ductus arteriosus, fetal death has also been reported. It is not clear, however, whether these reported events are related to ACE inhibition or the underlying maternal disease. It is not known whether exposure limited to the first trimester can adversely affect fetal outcome.

Infants exposed in utero to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion.

Enalapril has been removed from the neonatal circulation by peritoneal dialysis and theoretically may be removed by exchange transfusion, although there is no experience with the latter procedure.

There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 7200 mg/kg/day of enalapril, but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day but not at 30 mg/kg/day (50 times the maximum human dose).

If VASOTEC is used during pregnancy or if the patient becomes pregnant while taking VASOTEC, the patient should be apprised of the potential hazards to the fetus.

**Precautions: General Impaired Renal Function:** As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

**Evaluation of patients with hypertension or heart failure should always include assessment of renal function.** (See DOSAGE AND ADMINISTRATION.)

**Hyperkalemia:** Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See Drug Interactions.)

**Cough:** Cough has been reported with the use of ACE inhibitors. Characteristically the cough is nonproductive, persistent and resolves after discontinuation of therapy. ACE inhibitor-induced cough should be considered as part of the differential diagnosis of cough.

**Surgery/Anesthesia:** In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

**Information for Patients: Angioedema:** Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

**Hypotension:** Patients should be cautioned to report lightheadedness, especially during the first few days of therapy. If

actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure. Patients should be advised to consult with the physician.

**Hyperkalemia:** Patients should be told not to use salt substitutes containing potassium without consulting their physician.

**Neutropenia:** Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

**NOTE:** As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

**Drug Interactions: Hypotension: Patients on Diuretic Therapy:** Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

**Agents Causing Renin Release:** The antihypertensive effect of VASOTEC\* (Enalapril Maleate, MSD) is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

**Other Cardiovascular Agents:** VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

**Agents Increasing Serum Potassium:** VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

**Lithium:** Lithium toxicity has been reported in patients receiving lithium concomitantly with drugs which cause elimination of sodium, including ACE inhibitors. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. It is recommended that serum lithium levels be monitored frequently if enalapril is administered concomitantly with lithium.

**Pregnancy: Pregnancy Category D.** See WARNINGS, Fetal/Neonatal Morbidity and Mortality.

**Nursing Mothers:** Enalapril and enalaprilat are detected in human milk in trace amounts. Caution should be exercised when VASOTEC is given to a nursing mother.

**Pediatric Use:** Safety and effectiveness in children have not been established.

**Adverse Reactions:** VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

**HYPERTENSION:** The most frequent clinical adverse experiences in controlled trials were headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

**HEART FAILURE:** The most frequent clinical adverse experiences in both controlled and uncontrolled trials were dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

**Cardiovascular:** Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, Hypotension), pulmonary embolism and infarction, pulmonary edema, rhythm disturbances including atrial tachycardia and bradycardia, atrial fibrillation, palpitation.

**Digestive:** Ileus, pancreatitis, hepatitis (hepatocellular [proven on rechallenge] or cholestatic jaundice), melena, anorexia, dyspepsia, constipation, glossitis, stomatitis, dry mouth.

**Musculoskeletal:** Muscle cramps.

**Nervous/Psychiatric:** Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

**Respiratory:** Bronchospasm, rhinorrhea, sore throat and hoarseness, asthma, upper respiratory infection.

**Skin:** Exfoliative dermatitis, toxic epidermal necrolysis, Stevens-Johnson syndrome, herpes zoster, erythema multiforme, urticaria, pruritus, alopecia, flushing, diaphoresis.

**Special Senses:** Blurred vision, taste alteration, anosmia, tinnitus, conjunctivitis, dry eyes, tearing.

**Urogenital:** Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), impotence. A symptom complex has been reported which may include a positive ANA, an elevated erythrocyte sedimentation rate, arthralgia/arthritis, myalgia, fever, serositis, vasculitis, leukocytosis, eosinophilia, photosensitivity, rash, and other dermatologic manifestations.

**Angioedema:** Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

**Hypotension:** In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

**Fetal/Neonatal Morbidity and Mortality:** In infants exposed in utero to ACE inhibitors the following adverse experiences have been reported: Fetal and neonatal death, renal failure, hypoplastic lung development, hypotension, hyperkalemia, skull hypoplasia, limb contractures, craniofacial deformities, intrauterine growth retardation, prematurity and patent ductus arteriosus. (See WARNINGS, Fetal/Neonatal Morbidity and Mortality.)

**Clinical Laboratory Test Findings: Serum Electrolytes:** Hyperkalemia (see PRECAUTIONS), hyponatremia.

**Creatinine, Blood Urea Nitrogen:** In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

**Hemoglobin and Hematocrit:** Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 10 vol%, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

**Other (Causal Relationship Unknown):** In marketing experience, rare cases of neutropenia, thrombocytopenia and bone marrow depression have been reported. A few cases of hemolysis have been reported in patients with G6PD deficiency.

**Liver Function Tests:** Elevations of liver enzymes and/or serum bilirubin have occurred.

For more detailed information, consult your MSD Representative or see Prescribing Information, Merck Sharp & Dohme Division of Merck & Co., Inc., West Point, PA 19386.

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## Personals/Continued

sity. The Alumni Fellows Program brings former students back to the campus to share their insights and experiences with current students and faculty members.

**Michael J. Johns** of Corinth announces the opening of his new office on Alcorn Drive, Magnolia Doctors Plaza. He has also joined the staff of Magnolia Hospital.

**Michael E. Jabaley, Somprasong Songcharoen and Phillip K. Belvins** of Jackson have formed Plastic Surgery Associates through the merger of their practice of plastic and reconstructive surgery, cosmetic surgery, head and neck surgery and hand surgery.

**C. M. Murray** of Oxford was recently named the Eagle Class Honoree by the 1990 Eagle Scout Class of 1990. He has been involved in Scouting since 1931 and was recognized for his 50-plus years of membership and service to Scouting.

**John Mutziger** has joined the staff of the Family Medical Clinic of Decatur in the practice of Family Medicine, Musculoskeletal Disorders.

**Raymond J. Orgler** of Louisville announces the relocation of his office for General Surgery to 608 East Main Street.

**Shelby C. Reid** of Corinth was honored during the 1991 Joint Conference on Aging held March 21 in Biloxi. He was selected in the

Health Promotion category as the major Medicaid service provider of health services in the community. Dr. Reid was nominated because of his many hours and constant efforts to meet the health needs of low-income individuals and for his active role promoting senior and day care centers.

**John M. Senter** of Columbia recently attended the American College of Surgeon's annual meeting in San Francisco.

**Harry D. Stone** of Batesville attended the 42nd Annual Scientific Assembly of the Tennessee Academy of Family Physicians in Gatlinburg.

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## **Health Access America**

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We hear that a lot from our patients these days. For the 33 million people who have no health insurance, it's a particularly acute problem.

That's why the AMA has launched a proposal to improve access to affordable, quality health care. It's called *Health Access America*. The message is being sent to Congress, the media, labor and management organizations, concerned groups like AARP, and your fellow physicians.

Simply put, *Health Access America* proposes health insurance coverage for all

Americans, regardless of income or health status. It calls for expanded publicly-funded health care for the needy; a stronger Medicare system; employer-provided coverage for all workers and their families with tax incentives for small businesses.

America's physicians are leading the way to reforming the health care system by speaking out on these critical issues. To get a copy of the *Health Access America* proposal, please call our Member Service Center at 1-800-AMA-3211.

**The American Medical Association**  
on behalf of member physicians and their patients.



A message from The American Medical Association for the Health Access America Proposal



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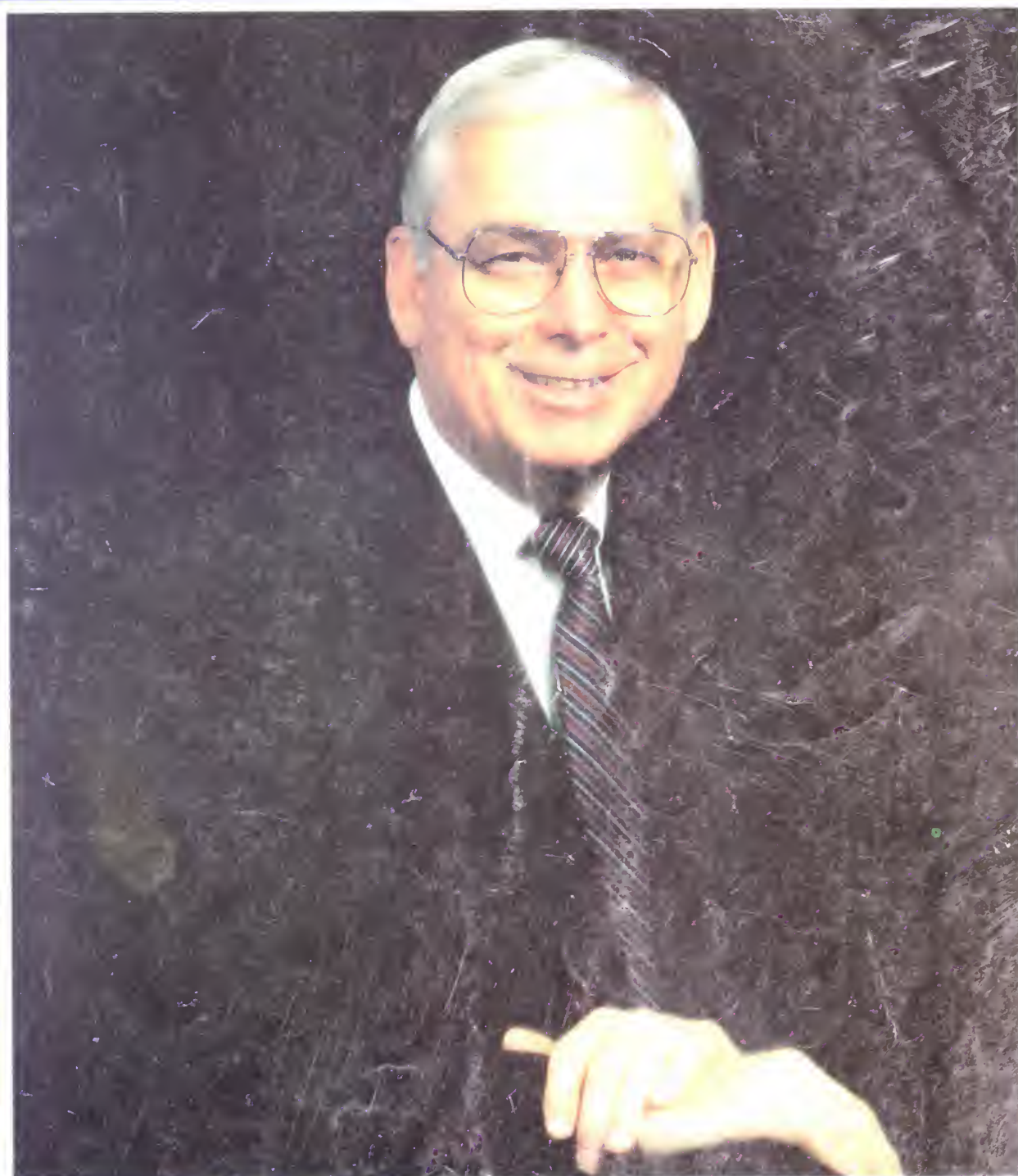


# JOURNAL

OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

MAY

1991



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# JOURNAL

OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

MAY 1991 VOLUME XXXII

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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 5

May 1991

Dear Doctor:

Health Choice 91, MSMA and MSMA Auxiliary's first student health seminar, was held April 5, on the campus of the University of Southern Mississippi. Approximately 200 people participated making the seminar a great success. Ninety-five of the participants were junior and senior high school students who participated in the Comprehensive Health Education Pilot classes conducted in 20 schools during the 1990 fall semester. Photographs and additional information about Health Choice 91 can be found on page 192 of this issue. Plans are already underway for Health Choice 92 which will be held in the spring of next year. Both teachers and students participating in Health Choice encouraged MSMA and the MSMA Auxiliary to continue their efforts to make Comprehensive Health Education a reality in all Mississippi schools.

Data gathered from 4,494 9th-12th grade students in Mississippi Public Schools by the Department of Education during the Spring of 1990 reveals the following information:

- Mississippi has one of the highest percentages of births to teens in the U.S.
  - 20.7% of all Mississippi births were to teens.
  - 20.3% of teens delivering in 1988 were having second child.
  - 7% were pregnant for the third time: 1% for the fourth.
- The infant mortality rate in Mississippi in 1989 was 11.6 per 1,000 live births, one of the highest in the nation, however, race specific infant mortality rates for Mississippi are close to those in other states.
- 72.6% of 9th-12th grade students reported being sexually active in a 1990 survey
- 1989 - Mississippi ranks 7th nationally in case rates for total Syphilis and 2nd in case rate for Gonorrhea.
  - 65% of all Gonorrhea occurs in individuals aged 25 and under nationally, 1 in 7 teens has been treated for STD although the incidence of AIDS is low in Mississippi, 27% of all diagnosed cases of AIDS in this state have occurred in those aged 20-29; AIDS has an incubation period which may be as long as 8-10 years, which indicates that some were infected as teens.



**The AMA  
Hospital Medical Staff Section  
Seventeenth Assembly Meeting  
June 20 - 24, 1991  
Chicago Marriott Hotel  
Chicago, Illinois**

**Highlights of the Annual Meeting will include:**

- an educational program on the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and Practice Parameters;
- presentation by the AMA-HMSS Governing Council of reports on medical staff issues including Evaluation of the Hospital Medical Director and Criteria for Evaluating the Performance of the Hospital Medical Director, PRO Required Education of Hospital Medical Staff and Patient Responsibility of On Call Physicians;
- an information exchange on PRO and Managed Care Review;
- AMA-HMSS Governing Council elections for the positions of Delegate, Alternate Delegate and one Member-At-Large.

**For Information Contact:**

Department of Hospital Medical Staff Services  
American Medical Association  
515 North State Street  
Chicago, Illinois 60610  
Phone (312) 464-4754 or 464-4761



**HMSS**



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# Dateline

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 5

## **Payment Reform Has Medicare Fees Lower Than Expected**

Washington, DC - Medicare fees when physician payment reforms begin next year will be 15% lower than anticipated just two years ago.

After adjustment for inflation, primary care services (10%) will get only a third of their expected gain and predicted surgical losses (29%) will nearly double.

A technicality in the way the reforms are to be phased in could reduce fees by another 6% a year by 1996. Then on top of this, fees will probably be sliced by at least another 1% as a preemptive strike against potential spending increases that could occur if physicians try to limit their losses by delivering more services.

## **Pregnant Drug User Wins Case**

Lansing, Mich. - The state Court of Appeals has ruled that a 24-year-old woman, Kimberly Hardy, should not stand trial for taking crack cocaine hours before the birth of her son. A lower court had ordered Hardy to stand trial for delivery of illegal drugs. The decision was the highest level ruling to date on the issue of whether women should face criminal prosecution for taking drugs while pregnant.

## **Data Bank Fee Raised**

Washington, DC - The Health Resources and Services Administration is hiking the cost of requests for information from the National Practitioner Data Bank from \$2 to \$6 per query. Queries also will have to be paid for up front. The data bank went into operation last September to help health care entities and state licensing boards check the backgrounds of physicians, dentists and other licensed health care professionals. It stores information on adverse actions taken against practitioners' licenses and clinical privileges, and malpractice payments made on their behalf.

## **Right-to-die Rehearing?**

St. Louis, MO - The attorney for the family of Christine Busalacchi, severely brain damaged in a 1987 auto accident, has filed a brief seeking a rehearing of the case in the Missouri Court of Appeals. If not, the brief asks that court to quickly transfer the case to the state Supreme Court. The brief said that the young woman's family, not the state, should decide her treatment. The family wants to withdraw feeding tubes from the young woman. The appeals court had sent the case back to a county probate judge, ordering more evidence.



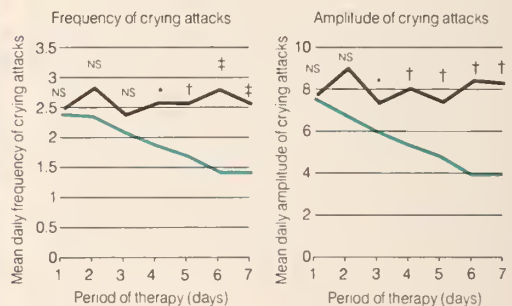
# Family therapy for colic.

The excessive crying of colic puts a strain on the most loving family—and often on their physician as well. And whatever the cause of colic, one fact is clear:

## Gas is often part of the colic problem.

New Phazyme Drops contains simethicone, which can safely break up gas and bring baby relief. That's why it can help whenever colic is a problem.

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This significant price advantage will be particularly important to parents, since they may be relying on Phazyme Drops for up to three months. And it's naturally flavored—something else they'll appreciate.



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<sup>1</sup> Kanwaljit SS, Jasbir KS. Simethicone in the management of infant colic. *Practitioner*. 1986;232:508

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PZ24



# Management of the Abnormal Pap Smear

JUDITH GORE GEARHART, MD  
BARBARA J. DAVEY-SULLIVAN, BS, M-3  
LORI J. FULTON, MD  
Jackson, Mississippi

Since the introduction of the Pap smear as a cancer screening method, the well-accepted test has been subject to controversy. Problems have included inadequacy of samples, noncompliance of patients with follow-up procedures, lack of reproducibility of interpretation, and lack of uniformity in management of abnormal smears. Attempts have been made to update the original "Class" system to reflect current understanding of risk factors and malignant potential of precancerous lesions. The most recent product of these efforts is the Bethesda System, designed to introduce a uniform reporting system and a national system of quality control. Ideally, the narrative descriptions characteristic of the Bethesda System will provide more guidance in the management of abnormal smears. Although there is no protocol that can meet the needs of every clinical situation, a consensus for management may be developed through knowledge gained from improving reporting. Current recommendations are reviewed.

### BETHESDA SYSTEM

The key points of the Bethesda system are as follows:

I. The Pap smear is a medical consultation obligating the clinician and the cytopathologist to perform and assess the smear adequately and to provide each other with adequate information.

II. The new reporting system requires that each report provide information about five aspects of the sample:

- A. A statement of specimen adequacy.
- B. General categorization as "within normal limits," and "other," which calls for descriptive diagnosis.
- C. Descriptive diagnosis of precancerous lesions in two categories: low-grade (formerly "mild dysplasia," "CIN I," or changes suggestive of human papillomavirus), and high-grade (formerly moderate dysplasia or CIN II and severe dysplasia/carcinoma in situ or CIN III).
- D. Descriptive diagnosis of cancer. (see Table 1.)<sup>1</sup> The Bethesda system as it relates to other widely used reporting systems is presented in Table 2.

### MANAGEMENT

In an outpatient management protocol, it is crucial that those performing pap smears and colposcopy rule out the presence of invasive disease and the need for conization.<sup>2,3</sup> (see Figures 1&2) The inadequate smear must be repeated, including the smear that lacks endocervical cells essential to adequacy. Follow-up of the normal smear is recommended at yearly intervals, as outlined in the preceding article.

Infection, inflammation, and atypia. If inflammation is reported on the Pap smear, treatment of the

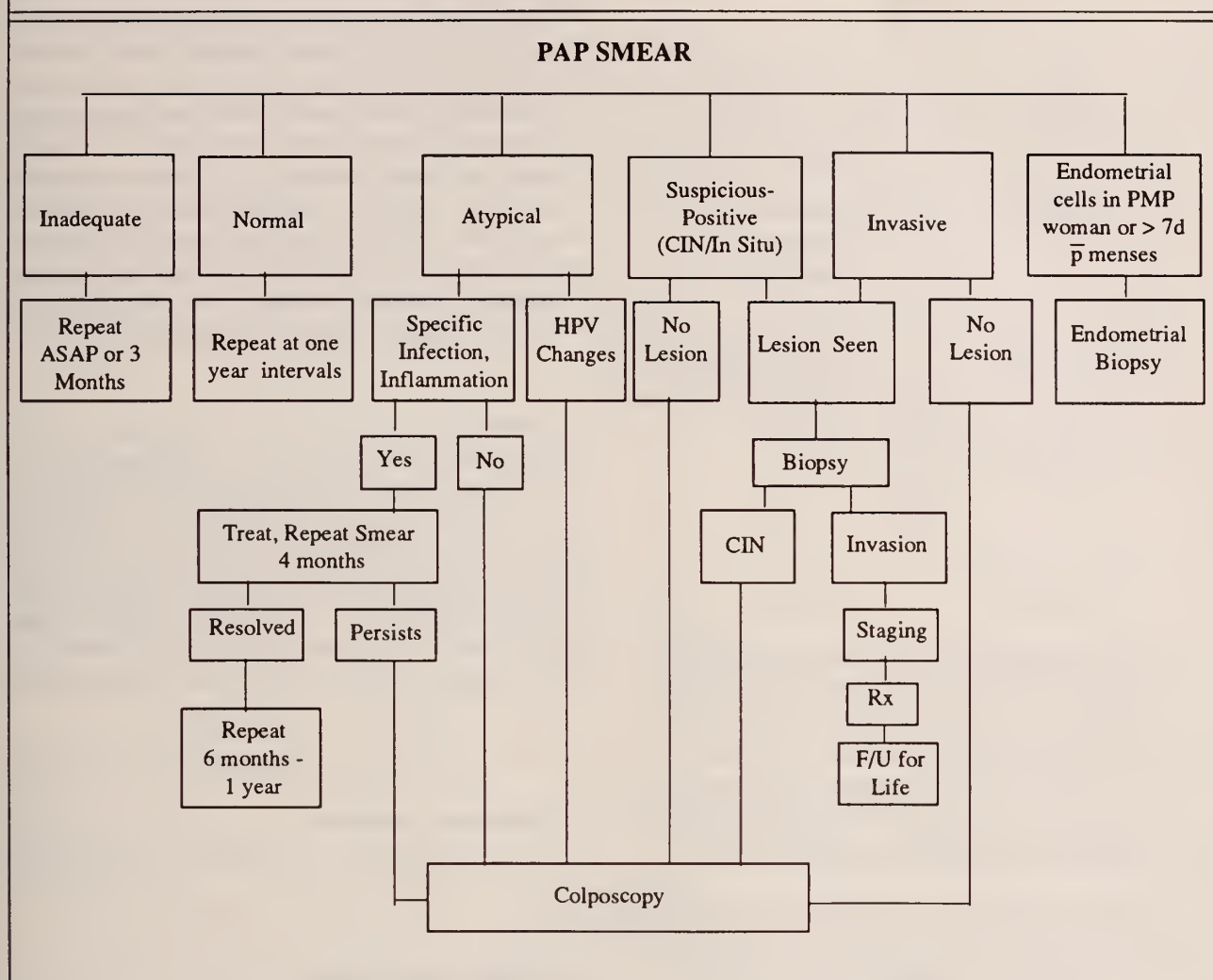


Table 1. The 1988 Bethesda System For Reporting Cervical/vaginal Cytological Diagnoses. <sup>1</sup>

Statement of specimen Adequacy	Effects of mechanical devices (e.g., intrauterine contraceptive device)
Satisfactory for interpretation	Effects of nonsteroidal estrogen exposure (e.g. diethylstilbestrol)
Less than optimal	Other
Unsatisfactory	
Explanation for less than optimal/unsatisfactory specimen:	
-Scant cellularity	
-Poor fixation or preservation	
-Presence of foreign material (e.g., lubricant)	
-Partially or completely obscuring inflammation	
-Partially or completely obscuring blood	
-Excessive cytolysis or autolysis	
-No endocervical component in a premenopausal woman who has a cervix	
-Not representative of the anatomic site	
-Other	
General Categorization	
Within normal limits	
Other:	
See descriptive diagnoses	
Further action recommended	
Descriptive Diagnoses	
<i>INFECTION</i>	
Fungal	
Fungal organisms morphologically consistent with <i>Candida</i> species	
Other	
Bacterial	
Microorganisms morphologically consistent with <i>Gardnerella</i> species	
Microorganisms morphologically consistent with <i>Actinomyces</i> species	
Cellular changes suggestive of <i>Chlamydia</i> species infection, subject to confirmatory studies	
Other	
Protozoan	
<i>Trichomonas vaginalis</i>	
Other	
Viral	
Cellular changes associated with cytomegalovirus	
Cellular changes associated with herpesvirus simplex	
Other	
(Note: for human papillomavirus [HPV], refer to "Epithelial Cell Abnormalities, Squamous Cell")	
Other	
<i>REACTIVE AND REPARATIVE CHANGES</i>	
Inflammation	
Associated cellular changes	
Follicular cervicitis	
Miscellaneous (as related to patient history)	
Effects of therapy	
Ionizing radiation	
Chemotherapy	
	<i>EPITHELIAL CELL ABNORMALITIES</i>
	Squamous Cell
	• Atypical squamous cells of undetermined significance (recommended follow-up and/or type of further investigation: specify)
	• Squamous intraepithelial lesion (SIL)(comment on presence of cellular changes associated with HPV if applicable)
	Low-grade squamous intraepithelial lesion, encompassing:
	Cellular changes associated with HPV
	Mild (slight) dysplasia/cervical intraepithelial neoplasia grade 1 (CIN 1)
	High-grade squamous intraepithelial lesion, encompassing:
	Moderate dysplasia/CIN II
	Severe dysplasia/CIN III
	Carcinoma in Situ/CIN III
	• Squamous cell carcinoma
	<i>Glandular Cell</i>
	• Presence of endometrial cells in one of the following circumstances:
	Out of phase in a menstruating woman
	In a postmenopausal woman
	No menstrual history available
	• Atypical glandular cells of undetermined significance (recommended follow-up and/or type of further investigation: specify)
	Endometrial
	Endocervical
	Not otherwise specified
	• Adenocarcinoma
	Specify probable site of origin: endocervical, endometrial, extrauterine
	Not otherwise specified
	• Other epithelial malignant neoplasm: specify
	<i>NONEPITHELIAL MALIGNANT NEOPLASM: SPECIFY</i>
	<i>HORMONAL EVALUATION (APPLIES TO VAGINAL SMEARS ONLY)</i>
	• Hormonal pattern compatible with age and history
	• Hormonal pattern incompatible with age and history: specify
	• Hormonal evaluation not possible
	Cervical specimen
	Inflammation
	Insufficient patient history
	<i>OTHER</i>



Figure 1. Flow Chart of Responses to Pap Smear Reports



causative agent is recommended. The Pap smear should then be repeated in three to six months. If the inflammation resolves, the smear may be repeated in six months. If inflammation persists, colposcopy-directed biopsy is indicated. If a biopsy reveals cervicitis, treatment should be followed with a repeat smear in three to six months.

The term "atypia" is subject to variability in interpretations. It cannot be assumed that a low-grade intraepithelial lesion is not implied. When there is atypia without an identifiable causative agent, it should be regarded as a squamous intraepithelial cell abnormality, and colposcopy should be performed.<sup>4</sup>

Because of the strong association between HPV and squamous intraepithelial lesions, the presence of genital or cervical condyloma is an indication for

colposcopy. Condyloma should be managed as squamous intraepithelial abnormality (CIN) regardless of the "Class" report. Biopsy is recommended for any degree of squamous intraepithelial lesion.<sup>5</sup>

### Biopsy

Indications for biopsy include persistent inflammation on repeated smears, atypia, condyloma, cervical intraepithelial neoplasia (i.e. squamous intraepithelial lesions) of any degree, and any abnormal visible cervical lesions. CIN occurs most frequently at 6 and 12 o'clock. Biopsy at these two positions and then at random sites will sample about 85% of invasive lesions.<sup>6</sup> Schiller staining may aid the biopsy procedure. The Schiller test, in use since 1938, utilizes a solution



**Table 2. Comparison of Reporting Systems for Pap Smears**

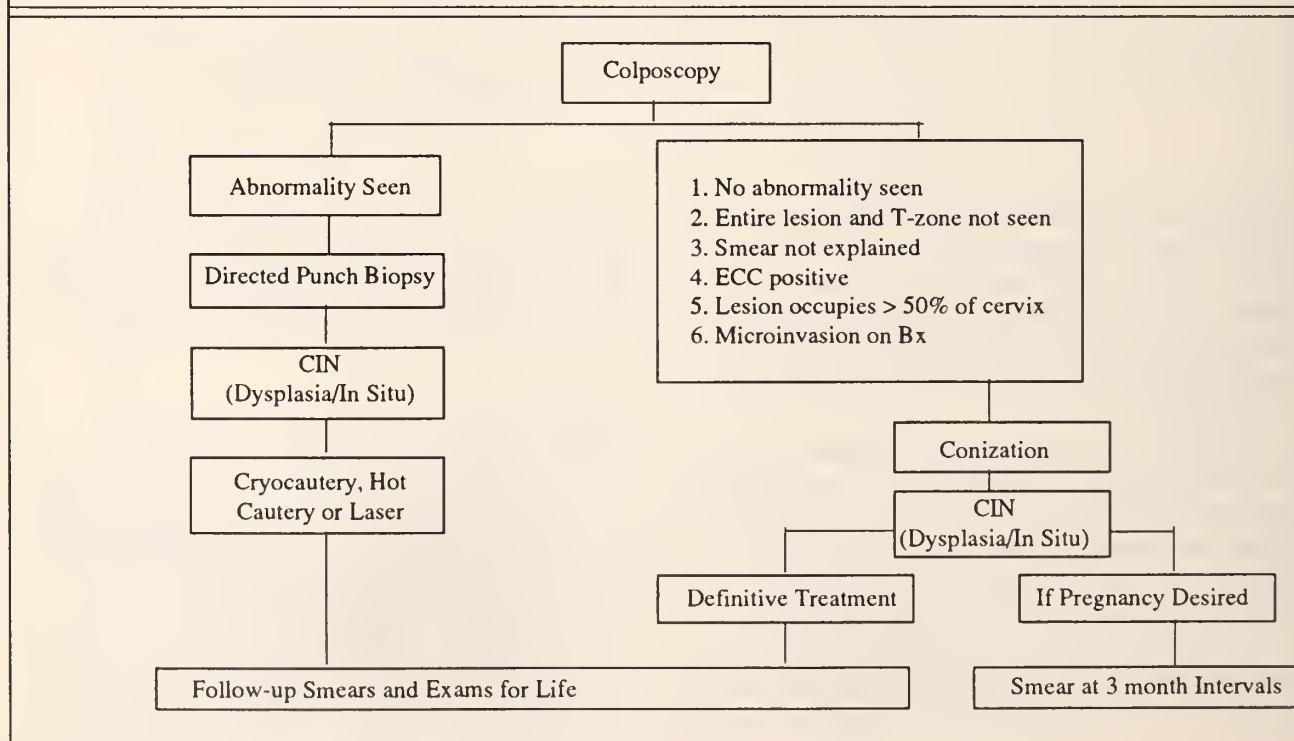
Class	Who	CIN	Bethesda
I	Normal	Normal	Within normal limits
II	Inflammation	--	Other: -Infection -Reactive and reparative
III	Dysplasia:		Squamous intraepithelial lesions
	Mild	CIN-1	Low grade
	Moderate	CIN-2	High grade
IV	Severe	CIN-3 and CIS	High grade
V	Invasive squamous cell carcinoma		Squamous cell carcinoma
	Adenocarcinoma		Adenocarcinoma

of sodium iodide and iodine, which reacts with glycogen to stain normal squamous epithelium. Abnormal epithelium lacks glycogen, and therefore is non-staining. A positive biopsy is almost always obtained from Schiller-positive areas, and is positive in 80% of cervixes harboring carcinoma in situ. A Schiller-directed biopsy plus endocervical curettage is positive in 95% of patients with CIS and in virtually all patients with early invasion. A Schiller test used at the time of colposcopy-directed biopsy is ideal; however, in the office of the primary care physician who has not invested in a colposcope, or whose patients would have difficulty traveling to a referral site, the Schiller-directed biopsy is still a useful tool.<sup>6</sup>

### Colposcopy

The sequence of the colposcopic exam is as follows: (1) Unaided visualization of the cervix and vagina. (2) Cleansing of the cervix with diluted acetic acid solution. (3) Colposcopic visualization. (4) Location of the transformation zone. (5) Determination of the extent of the lesion. (6) Performance of Schiller staining, if desired. (7) Repetition of the Pap smear. (8) Performance of cervical biopsy. (9) Performance of

**Figure 2. Flow Chart of Responses to Finding on Colposcopy**





endocervical curettage.<sup>7</sup> Criteria for adequate colposcopy included complete visualization of the transformation zone and lesion; correlation between the Pap smear, the biopsy, and the clinical impression of the colposcopist; endocervical curettage that is negative for neoplasia; and a lesion that occupies less than fifty percent of the cervix. Also, the Pap smear and the biopsy must show intraepithelial disease only.<sup>6,8</sup>

Ninety percent of women with abnormal cervical cytology can be adequately evaluated with the colposcope. If colposcopic examination is inadequate, or if the Pap smear, the biopsy, and the colposcopic image disagree, then diagnostic conization is indicated.<sup>2,8</sup> If colposcopy is adequate, treatment options

in Figures 1 and 2.<sup>2,3</sup>

## SUMMARY

In an outpatient protocol for management of the abnormal Pap smear, it is crucial that physicians rule out the presence of invasive disease. To that end, it is essential to acquire thorough knowledge of cervical cancer risk factors, including human papilloma virus. Physicians must also be familiar with Pap smear reporting systems and the implications of Pap smear reports. Cervical biopsy, colposcopy, and endocervical curettage are important tools in evaluation of the abnormal smear. Recent research underscores the importance of performing colposcopy to assess not only dysplasia, but also atypia and HPV changes.

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Table 3. Criteria for Selection of Cryosurgery or Conization <sup>6,7</sup>		
Criterion	Cryosurgery	Conization
Location of transformation zone	Seen entirely on external os	Extends into endocervical canal
Extent of lesion	Limited to endocervix	Extends into cervix
Degree of neoplasia	Preinvasive	Invasive
Endocervical curettage	Negative	Positive

may include cryocautery, CO2 laser, hot cautery, or conization.<sup>9</sup> Criteria for selection of conization versus other measures are listed in Table 3.<sup>7</sup> In short, the complete extent of the lesion must be known before recommending treatment.

## Treatment of Carcinoma in Situ

Conization yields a 98% cure rate if margins of the specimen are negative; the cure rate is 70-80% if margins are positive. Electrocautery has a 90% cure rate, but a high complication rate and associated pain. Cryocautery has a 96% cure rate for lesions smaller than 1cm in diameter; the cure rate is 58% for lesions greater than 1cm. The CO2 laser yields a 90 to 95% cure rate if the entire transformation zone is vaporized.<sup>6,9</sup> If only the lesion is vaporized, the rate falls to 70-90%. Hysterectomy is the primary treatment if future pregnancy is not desired.<sup>6</sup> Treatment is outlined



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# The Use Of The Pap Smear In Mississippi

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The "Pap test", performed annually on millions of women, has contributed significantly to the reduction of morbidity and mortality rates from invasive carcinoma of the cervix in appropriately screened populations. During the last 40 years there has been a 70% decrease in the overall death rate from uterine carcinoma; however, there were approximately 7,000 deaths from cervical carcinoma in 1988, along with more than 50,000 cases of carcinoma.<sup>1</sup> In Mississippi there were 66 deaths from cervical carcinoma in 1988.<sup>2</sup>

Although the Pap test is undeniably important, the Pap smear testing process is prone to disturbing failures, including the lack of uniform reporting systems and uniform management when Pap smears are reported as abnormal.<sup>3</sup> This article addresses the use of the Pap smear among Mississippi physicians practicing the specialties of obstetrics and gynecology, family medicine, internal medicine and general practice.

## Historical Perspective

In 1943 the Papanicolaou smear was developed for the early diagnosis of cervical carcinoma. Mass cervical cytology screening was introduced in the mid-1950's. Papanicolaou's system has been used to classify degrees of cellular atypia from Class I through Class V, a continuous spectrum of abnormalities from non-specific atypia, varying degrees of dysplasia, carcinoma in situ, and invasive carcinoma.<sup>4</sup> New developments identified the need for a system of classification that emphasized the progression of dysplasia to carcinoma in situ. In 1969, Richart's prospective study demonstrated the potential for dysplasia to progress to carcinoma in situ and invasive cancer,<sup>5</sup> a concept that has since been well accepted.

By 1973, Richart's new classification system, cervical intraepithelial neoplasia (CIN), was established. CIN consists of three grades: CIN I, CIN II, and CIN III, which correspond essentially to mild dysplasia, moderate dysplasia, and carcinoma in situ.<sup>4</sup> In 1976, Meisels and his colleagues demonstrated convincingly that early cases of CIN could not be distinguished from infections with human papilloma virus (HPV). Since these early studies, thousands of articles have been published that have shown the presence of HPV to be a common factor in both invasive cervical cancer and its noninvasive precursors.<sup>6</sup>

Along with the "class" and CIN systems of classification, many labs report cytologic descriptions such as inflammation, atypia, and dysplasia, terms which may be interpreted differently by different physicians, cytotechnologists, and pathologists who view the Pap smear. These multiple reporting systems have made it difficult for many physicians to uniformly manage patients with abnormal Pap smears. In 1988, in an effort to create a system of uniform terminology and reporting, the National Cancer Institute devised the new Bethesda system for reporting cervical/vaginal cytologic diagnoses.<sup>7</sup>

## Pap Smear Screening

The principle goal of Pap smear screening is not to detect overt clinical carcinomas, but to detect occult carcinomas and precancerous abnormalities that may lead to invasive carcinoma.<sup>3</sup> To ensure uniform cytology reporting and management of these abnormalities, the health provider should pursue a management protocol based on the Pap smear report. This plan should incorporate recent knowledge of viral infec-



tions, cellular changes, and the value of colposcopic evaluation. To assess current use of the Pap smear in Mississippi, physicians were surveyed regarding their perceptions of cervical cancer risks, screening frequency, and response to abnormal Pap smears.

## METHODS

Physicians practicing obstetrics and gynecology, family medicine, internal medicine, and general practice were selected for this survey. A list of 956 physicians practicing these specialties was obtained from the Mississippi State Medical Association (175 ob/gyn, 450 family medicine, 272 internal medicine, and 59 general practice). This list included both members and non-members of the MSMA. A copy of the Pap smear management survey and a cover letter explaining the nature of the study were mailed to each physician. The survey contained a combination of multiple choice and open-ended questions concerning physician management of "normal" and "abnormal" Pap smear cytology reports. The questionnaire was piloted among physician faculty and took approximately 4 minutes to complete. Physicians not performing Pap smears were asked to return the questionnaire unanswered.

Descriptive statistics were used to describe the study sample. Means and standard deviations were calculated for age, year of graduation from medical school, and year of board certification. Frequencies and percentages were determined for gender, specialty, type of practice, board certification, and community size.

## RESULTS

### Characteristics of Participants

Of the 956 physicians surveyed, 10 surveys were returned because the physicians had moved and left no forwarding address. Of the remaining 946 physicians available for study, 404 physicians (42.7%) responded. Seventy-three of these physicians did not perform Pap smears and were excluded from the study. The descriptive statistics are shown in Table 1.

Three hundred thirty-one survey participants performing Pap smears reported a mean of 6 ( $\pm$  9.1) abnormal Pap smears each month. The classification systems used by participating physicians' reference labs to report abnormal Pap smears are as follows: 18% used CIN I-III, 68% used Class I-V, 46% used cytological description, and 4% of the participating physicians did not know what classification system their labs used. Some of the labs used multiple sys-

Table 1. Characteristics Of The Participants (N = 331)\*

Participant Characteristics	Number	Percent **
Mean age (range 28-81 years)	45.8+	
Mean year graduated from Medical School (range 1934-1988)	1971++	
Board Certification		
Yes	238	72
No	73	22
Pending	18	5
Mean year board certified (range 1954-1990)	1979+++	
Gender		
Male	277	84
Female	28	9
Specialty		
Ob/Gyn	81	25
Family Medicine	150	45
Internal Medicine	59	18
General Practice	41	12
Type of Practice		
Private	285	86
Emergency room	3	1
Academic medicine	24	7
Public health	12	4
Veterans administration	1	.3
Other	6	2
Community size		
< 9,999	83	25
10,000 - 19,999	56	17
20,000 - 49,999	89	27
50,000 - 99,999	24	7
> 100,000	78	24
* Numbers not totaling N value reflect unanswered questions		
** Percentages rounded		
+ Standard deviation 12.1 years		
++ Standard deviation 12.2 years		
+++ Standard deviation 7.1 years		

tems of classification. Both the presence and the absence of endocervical cells were reported by 71% of the labs; 14% reported absence only; 6% reported pres-



ence only; and 5% made no reference to endocervical cells. Twenty-five percent of the participating physicians were familiar with the new Bethesda system for reporting abnormal Pap smears, and one physicians' lab used the Bethesda system. Seventy-four percent of the responding physicians had a protocol for managing abnormal Pap smears.

Forty percent of the participating physicians performed cervical biopsy, 19% performed the Schiller test, 25% performed colposcopy, 30% performed cryosurgery, 6% performed thermocautery, 4% performed CO2 laser, and 2% performed conization in their offices. Some of the responding physicians indicated that they performed many of these procedures at the hospital and not in their offices, so the percentage of physicians who performed these procedures may be higher. Physicians referred patients to another physician for the following procedures: 65% referred for cervical biopsy, 60% referred for Schiller test, 72% referred for colposcopy, 67% referred for cryosurgery, 62% referred for thermocautery, 72% referred for CO2 laser, 72% referred for conization, 70% referred for microcolpohysteroscopy, and 75% referred for hysterectomy.

#### Physicians' Recommendations

Participating physicians' recommendations for routine Pap smears were as follows: 81% recommended Pap smears every 12 months, 7% every 24 months, and 3% every 36 months. For patients at increased

risk for developing cervical cancer, 41% of the physicians recommended Pap smears every 6 months, 9% every 9 months, and 40% every 12 months. Physicians perceptions of the risk factors for developing cervical cancer are listed in Table 2. Comparisons among the four specialties were not significant with regard to the physicians' perceptions of cervical cancer risk factors.

Physicians were asked how soon they recommended repeating Pap smears for their patients in response to hypothetical cytologic reports, and the results are listed in Table 3. If the cytology report indicated the absence of endocervical cells, 32% of responding physicians recommended repeating the Pap smear within 6 weeks. Twenty-six percent recommended performing another Pap smear in 10 months to 3 years. For Pap smears reported to be inadequate, other than for absence of endocervical cells, 64% recommended repeating the Pap smear within 6 weeks. Ninety-two percent of the responding physicians recommended Pap smears every 10 months to 3 years if the Pap smear was reported as negative. For Pap smears with inflammation/atypia, 57% of responding physicians recommended repeating the Pap smear within 4 months; for moderate dysplasia, 60% recommended repeating the Pap smear within 9 months; and 37% chose another option, most often to refer or to perform colposcopy. For a report of carcinoma in situ, 63% of the physicians preferred an option other than repeating the Pap smear; most often to refer, to perform colposcopy, or

Table 2. Physicians Perceptions Of Risk Factors For Developing Cervical Cancer

Patients with a history of:	
Percent	Risk factor
91	Multiple sexual partners*
66	Partner with multiple sexual partners*
79	Sexual activity before the age of 18*
8	Yeast infection
27	Trichomonas*
17	Gardnerella*
39	Chlamydia*
72	Herpes*
91	Condyloma or other indications of exposure to Human Papilloma Virus*
88	Previously abnormal Pap smear*
14	Atrophic changes associated with decreased estrogen
33	Smoking*
72	DES offspring

\* Factors known to be associated with an increased risk of developing cervical cancer according to the American Cancer Society.



Table 3. Participating Physicians Recommendations In Response To Pap Smear Reports (percentages)

	Within 2 weeks	3-6 weeks	7 weeks- 4 months	5-9 months	10 months- 3 years	Other Option
a. Endocervical Cells absent	15	17	10	14	26	5
b. Inadequate (except for a)	30	34	14	7	5	4
c. Negative	1	1	0	2	92	1
d. Inflammation/atypia	2	17	38	28	6	5
e. Moderate dysplasia	9	21	20	10	0	37
f. Carcinoma in situ	27	6	1	0	0	63

Rows not totaling 100% reflect unanswered questions.

to biopsy.

Physicians were also asked what treatments they recommended for patients whose Pap smears indicated inflammation/atypia, moderate dysplasia, and carcinoma in situ. For Pap smears indicating inflammation/atypia, 81% of the responding physicians would treat the patients for inflammation and repeat the Pap smear. For moderate dysplasia, physicians chose cervical biopsy (41%) and colposcopy (45%) along with repeating the Pap smear (37%) for further evaluation of these patients. Forty-four percent of the physicians would have referred the patient with moderate dysplasia. Cervical biopsy (37%), colposcopy (37%), and referral (62%) were recommended for evaluation of carcinoma in situ. For carcinoma in situ, the treatment of choice was conization (33%).

## DISCUSSION

The Pap smear is used by the Mississippi physicians who participated in this study for both early cervical cancer detection and for further evaluation of previously "abnormal" or inadequate Pap smears. It is important for the physician who performs the Pap smear and makes treatment decisions based on the report to have an understanding of the reference lab reporting system. Most physicians knew what system their labs used: 68% used the old Papanicolaou "class" system. Apparently most labs used by participating physicians are not yet using the Bethesda system, though 25% of physicians were familiar with the system. It is anticipated that most labs will be using the Bethesda system in the future.<sup>7</sup>

There has been considerable controversy concerning the required frequency of Pap smear screening.

The American College of Obstetricians and Gynecologists and the American Cancer Society, along with seven major health organizations have reached a consensus: (1) Annual Pap smears are recommended for all women who are or have been sexually active or who have reached the age of 18. (2) After three normal examinations Pap smears may be performed less frequently at the physician's discretion. (3) Women in high-risk groups should continue to have annual Pap smears.<sup>8</sup> One risk factor to consider in recommending frequency of Pap smear screening is sexual history. Although most of the physicians considered their patient's sexual history as a risk factor for developing cervical cancer, fewer recognized their patients' partners' sexual history as a risk factor. Most physicians considered human papilloma virus and herpes as risk factors, but chlamydia, trichomonas, and gardnerella were not considered by most of the participating physicians to place a patient at increased risk for the development of cervical cancer. A women with any sexually transmitted disease is considered at increased risk for cervical cancer due to an increased likelihood of HPV exposure.<sup>9</sup> Another risk factor that is often unrecognized is smoking. Women who smoke are at increased risk for developing cervical cancer independent of their sexual history,<sup>9</sup> although only one-third of the physicians recognized smoking as a risk factor. Physicians need to be familiar with the risk factors and identify those high-risk patients who need more frequent Pap smear screening.

In some cases Pap smears are used to further evaluate a previously abnormal or inadequate Pap smear. If a Pap smear was reported as inadequate, 64% of the responding physicians recommended repeating the Pap smear within 6 weeks; but for Pap smears with



endocervical cells absent, 32% recommended repeating the Pap smear within 6 weeks. Results of this survey indicate that Pap smears lacking endocervical cells are not considered inadequate by many physicians. The presence of endocervical cells or a Pap smear is required as an indication of a complete cervical cell sample.<sup>3</sup> Pap smears reported as lacking endocervical cells should be repeated just as one would repeat those reported as inadequate for other reasons. The results of this study also indicate that most responding physicians had some protocol for management of Pap smears and that their responses to abnormal smears are generally in keeping with current guidelines. Recommendations for the management of abnormal Pap smears are covered in another article.

### Limitations

The authors of this survey attempted to write nonambiguous questions. However, ambiguity of terms is one of the problems with adequate Pap smear interpretation and management. Some of the terminology used in the survey questions may not have been interpreted by the participating physicians as it was intended by the authors. A potential source of confusion may have been the question, "How soon would you recommend repeat Pap smears in response to the following reports?" For the sake of brevity, all possible reports were not listed; therefore, the list may have appeared incomplete. Also, it is recognized that physicians must individualize management based on factors other than the Pap smear alone, and an appropriate response to a hypothetical report may not be clear-cut.

### SUMMARY

Mississippi physicians participating in this survey generally followed the recommended guidelines for frequency of Pap smear screening in the general population and for high risk groups. While the participating physicians considered the presence of some sexually transmitted diseases to increase the risk of developing cervical cancer, many did not consider other STD's to place a patient at increased risk. Smoking was another risk factor that many physicians overlooked. Many Mississippi physicians also did not consider a Pap smear lacking endocervical cells inadequate. All physicians performing Pap smears need to be aware of the risk factors for the development of cervical cancer. There is a continuing controversy concerning the significance of certain Pap smear findings, the timing of colposcopic intervention, and the management of ab-

normal findings on these tests. Clinical decisions should be based on the newer concepts of degrees of dysplasia, cytological and descriptive findings, and the potential for rapid progression of lesions.<sup>9</sup> Management of the abnormal Pap smear is the topic of another article in this issue of the Journal.

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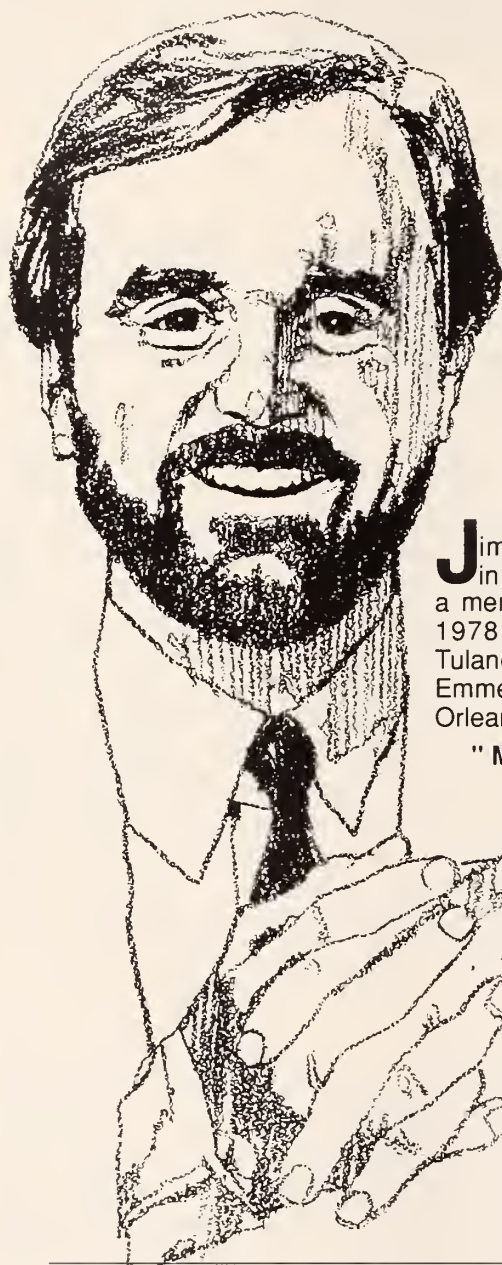
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# Tertiary Referral Patterns of Mississippi Physicians: A Baseline Analysis

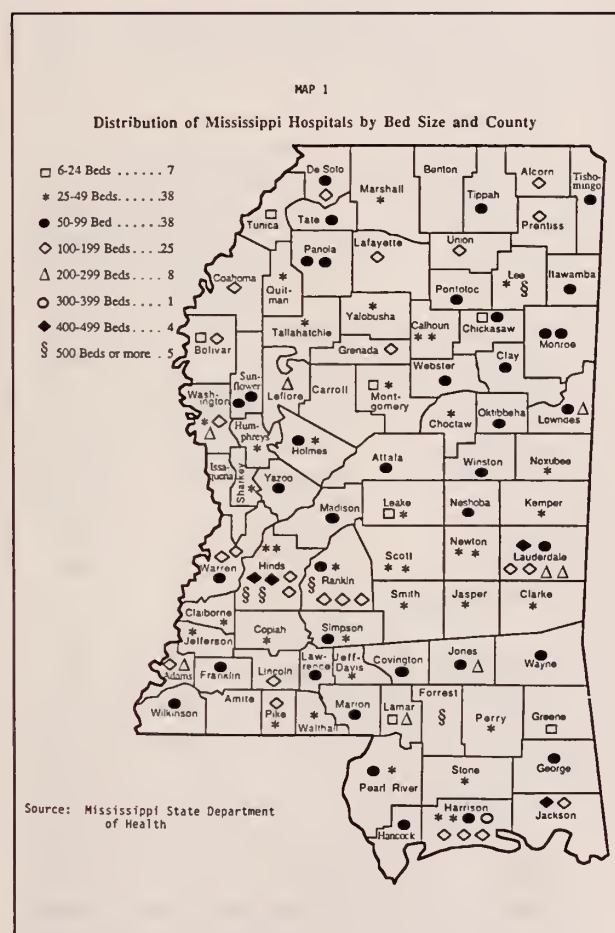
DAVID E. BUSSONE, MBA, FACHE  
Jackson, Mississippi

Mississippi is a rural state with hospitals and physicians dispersed primarily according to distribution of its population rather than its geography or land mass. (see Map 1 and Exhibit 1) The referral patterns of physicians with regard to tertiary health care services is of particular interest because of this dispersion of resources, and because of the large number of smaller rural hospitals which constitute this state's main body of acute inpatient care providers. Conversely, there are few hospitals, only 8 of 116 licensed hospitals<sup>1</sup>, with capacities in excess of 300 beds and which are capable of providing the broad range of services often required for referral purposes. Hospitals of 500 beds or more comprised only 3.4% of hospitals in 1988, but contained almost 18% of the state's beds.<sup>1</sup>

In late 1986, The University Hospital at the University of Mississippi Medical Center undertook a state-wide physician study in order to learn more about the specific referral patterns of Mississippi's physicians. The data obtained from this study can be utilized to provide an overview of these patterns and a baseline analysis for future reference.

## Study Participants

Two hundred and three (203) Mississippi physicians participated in the survey which consisted of a questionnaire administered by telephone. Of this number, 101 (49.75%) considered their practices to be primary in nature. Eighty one (39.91%) physicians stated that their practices were specialty oriented, and twenty one (10.34%) replied that they provide both primary and specialty care. Table 1 provides the specific ma-



keup of the survey participants, according to their own practice designations. Data also reflect that 35 (17.24%) physicians practiced in a clinic setting, while 83 (40.89%) were en-



Exhibit I. Percentage Distribution of Population and Hospital Beds in Mississippi by Service Area, 1988

Service Area	Population*	Percentage of Population	Licensed Beds	Percent of Beds
State Total	2,748,786	100.0	13,378	100.0
Service Area I	666,526	24.2	3,111	23.2
Service Area II	386,550	14.1	1,627	12.2
Service Area III	719,589	26.2	3,854	28.8
Service Area IV	158,463	5.8	1,086	8.1
Service Area V	132,778	4.8	701	5.2
Service Area VI	276,287	10.0	1,455	10.9
Service Area VII	408,593	14.9	1,544	11.5

\* 1988 MSDH population projections based on 1985 population projections from the R&D center.  
Source: Mississippi State Department of Health

gaged in group practices, and 79 (38.92%) were in solo practice. Only 6 (2.96%) physicians surveyed were hospital based.

Table 1. Physician Practice Types (n=203)

Practice Type	%Primary	%Specialty	%Both
Cardiologist	0	7	0
Cardiovascular Surgeon	0	5	0
Emergency Medicine	3	0	5
Family Practice	53	1	5
Gastroenterologist	0	2	0
General Surgeon	4	19	10
Internal Medicine	9	4	10
Neurologist	0	2	0
Ob/Gyn	6	15	14
Ophthalmologist	2	5	10
Orthopedic Surgeon	1	6	5
ENT	1	2	5
Pediatrician	12	2	33
Plastic Surgeon	0	2	0
Psychiatrist	1	7	0
Urologist	1	11	0
Other	3	6	5
General Practice	4	1	0

Participants identified more than fourteen residency training sites where their postgraduate medical education was completed. The University of Mississippi Medical Center was reported by 78 (38.42%) respondents as the site of their professional training. Charity Hospital of New Orleans was the second most frequently mentioned program location, with 15 (7.39%)

citations. One hundred twenty seven physicians, or almost two thirds of those surveyed, had been in practice for 20 or more years. Only twenty one percent of the study's participants had been in practice for fewer than 5 years. Tables 2 and 3, respectively, note the length of time respondent physicians had been in practice and the geographic location of their practices.

Table 2. Practice Duration of Participants(n=203)

Duration (in years)	Primary	Specialty	Both
< 5 Years	21	17	5
> 5, < 10	12	20	1
> 10, < 20	24	21	10
> 20 Years	44	23	5
Mean	18.04	14.78	15.24
S.D.	11.37	10.58	9.90
n	101	81	21

Table 3. Practice Location of Participants (n=203)

Geographic Area	N	%
Northeast	38	19
Northwest	17	8
Central	62	31
East	15	7
Southwest	20	10
Southeast	51	25



## Patient Referrals

Mississippi physicians who designated their practices as primary in nature stated that they referred a mean of 108.34 patients a year. Those physicians whose practice was specialty oriented referred a mean of 89.94 patients per year. Physicians whose practice encompassed both primary and specialty work referred a mean of 87.74 patients per year.

Number of Annual Patient Referrals (By Referring Physician Type)			
	Primary	Specialty	Both
Mean	108.34	89.94	87.74
S.D.	47.58	48.20	47.41
N	99	78	21

The average number of patients referred each year by respondents to another physician was ninety nine. Thirty seven percent of reporting physicians stated that they referred 120 or more patients each year, and another twenty percent noted referring between 110 and 119 patients annually.

When questioned about their referral decisions, physicians responded with specific issues relative to their decision making process. Some of the issues were:

- The physicians's reputation among other doctors.
- Familiarity/past experience with the specialist.
- Geographic distance from the practitioner's office.
- The reputation of the hospital at which the specialist practiced.
- Cost of services at the hospital where the specialist practiced.
- Patient preference for a particular specialist, community, or hospital.
- Patient's ability to pay for treatment.
- The specialist practices at a teaching hospital.
- The specialist practices at a tertiary level referral facility.
- Recommendations from other physicians.
- Reputation of the hospital's ancillary support services.
- Availability of the latest technology & equipment.
- Availability of outpatient services.
- Availability of competent sub-specialty consultants.

Physicians were also asked to respond with the two primary reasons involved with their selection of a referral specialist. The most frequently cited rationale was related to geographic proximity of the specialist. The second most frequently cited reason was the physician's personal familiarity with the specialist to whom a patient was referred. The ability of a patient to pay for services, and rapidity with which the service could be rendered were among the least frequently mentioned reasons.

However, when questioned about their specific reasons for preferring one referral institution over another respondent physicians provided the following information:  
(see table 4).

**Table 4. Reason for Preferring One Tertiary Referral Institutions Over Others**  
(By % of Referring Physicians)  
(n=203)

Reason	Percent
Reputation of specialist	16
Know specialist there	15
Quality of care	14
Hospital is close	13
Reputation of hospital	7
Specialist communicates better	6
Follow-up	4
Had satisfactory experience	4
Patient preference	3
Availability of service	3
Refer to doctors, not hospital	3
On faculty	2
Other	6
Don't know	2

Clearly, as it relates to hospital referral resources, the reputation of the specialist to whom a physician refers patients, and a personal knowledge of that specialist are important factors in the decision making process. The proximity of the referral hospital, while significant, is less of a factor. In other words, this finding would seem to substantiate the premise that a patient is referred to another physician rather than a facility.

The respondent group was also asked to identify the primary institution with which their referral specialists were identified. Seven Mississippi hospitals were identified by fifty seven percent of physicians as the inpatient practice locations of their referral spe-



cialists. Five percent of the respondents did not identify a facility; however, thirty three percent noted that a non-Mississippi facility was frequently identified with their referral specialists. Table 5 notes the referral institutions utilized by the specialists to whom respondent physicians referred patients. In addition, twenty five percent of physicians indicated that a non-Mississippi facility was the routine and primary recipient of their referred patients.

**Table 5: Primary Referral Institution**  
(By % of Referring Physicians)

Facility	Percent
University of Mississippi Medical Center	21
Mississippi Baptist Medical Center	12
St. Dominic-Jackson Memorial Hospital	10
Baptist Memorial Hospital-Memphis	6
Hinds General Hospital	4
Forrest General Hospital	4
North Mississippi Medical Center	4
Memorial Hospital-Gulfport	2
Oschner Hospital & Clinic	2
Other Mississippi Hospitals	5
Other Non-Mississippi Hospitals	25

### Patients Referred Out of Mississippi

Because of the significant percentage of non-Mississippi specialists and facilities to which patients are referred, it was of interest to learn of the medical conditions associated with these patients. When queried for this information, respondents were given an opportunity to list the three most frequent conditions for which patients were sent out of state. Cardiovascular and oncology conditions were the two specific causes for referral mentioned most frequently. These are displayed in table 6.

Ninety four physicians (46.3% of the sample) replied that they referred some number of patients outside of Mississippi each year. The average annual number of outside referrals was 30 patients per physician. However, eight percent, of those physicians who referred patients out of state, responded that more than 100 patients were referred on an annual basis. A majority, 85%, reported referring fewer than 60 patients per year. Table 7 provides a more complete analysis of this data.

If they utilized non-Mississippi specialists, physicians under the age of forty referred outside the state

**Table 6. Medical Conditions for Which Physicians Prefer to Send Patients Out of State**  
(n=203, 3 responses)

Response	Percent
Heart/cardiovascular	14
Cancer/radiation therapy	11
Neurology	5
Neurosurgery	4
Pediatrics	4
Nephrology	3
Orthopedics	2
Transplantation	2
Ob/Gyn	2
Neonatology	2
Patient's Request	2
Other	19
None	53

**Table 7. Number of Patients Referred Outside of Mississippi Annually**  
(By % Referring Physician) (n=94)

Number of Patients	Percent
1-19	59
20-39	15
40-59	11
60-79	*
80-99	*
100-119	3
>120	5
Don't Know	4
Average Number of Patients 30	
* Mentioned by less than 2% of respondents	

with greater frequency (an average of nearly 40 patients per year) than physicians of other age groups. Physicians in the 40-49 and 50-59 age brackets referred fewer than thirty but more than 20 patients, on average.

Further questioning, with regard to the specific non-Mississippi facilities to which patients were referred, revealed that eleven hospitals were mentioned. Oschner Hospital & Clinic was named more often than any other out-of-state facility. Baptist Memorial Hospital of Memphis and the University of Alabama at Birmingham were the second and third most frequently specified institutions. These data are displayed in Table 8.



**Table 8. Non-Mississippi Hospitals with which Referral Specialist are Associated (By Referring Physician Type) (n=94)**

Hospital	Primary	Specialist	Both
Baptist-Memphis	7	4	2
Le Bonheur	4	1	0
Methodist-Memphis	0	0	1
Oschner Hospital & Clinic	17	3	2
Tulane	1	2	0
University of Alabama- Birmingham	4	7	3
M.D. Anderson	2	4	0
University of South Alabama	2	2	0
AMI Brookwood	0	2	0
LSU	1	1	0
Mayo Clinic	1	1	0
Other/Don't know	7	10	3

Physicians in group practice settings represented almost 46% of those whose referral patterns included the hospitals and associated specialists noted in the table above. Solo practitioners were identified as the next most likely group to refer to these facilities; hospital based physicians were least likely.

As might be expected, physicians from the Northeast and Southeast regional areas tended to refer more heavily to specialists outside the state. However, it was in the Central regional area where this practice was most frequently noted, according to the responses of participants. It was also somewhat surprising to find that physicians in the Southwest and Northwest regional areas did not display more intense patterns of referral to non-Mississippi specialists and their associated hospitals. Table 9 documents respondent findings relative to this aspect of the survey.

**Table 9. Regional Distribution of Physicians Who Refer Patients to Out-of-State Specialists (by Number of Physicians) (n=94)**

Office Location	Number
Northeast	22
Northwest	10
Central	26
East	6
Southeast	25
Southwest	5

## Conclusions

Physicians who practice in Mississippi, on the whole, utilize referral specialists who also practice in Mississippi. However, data resulting from a baseline survey indicated that a significant number (46.3%) of this state's physicians frequently utilized specialists who are associated with non-Mississippi facilities.

The primary reason for referral to out-of-state physicians would appear to be related to the referring physician's professional relationship with a specialist, rather than either the medical condition which necessitated the referral or the location of the referring physician's postgraduate professional training. Although geography plays some part in determining referral patterns for tertiary patient needs, there are some inconsistencies which cannot be explained simply. For example, referring physicians who practice in the central region of the state are located in proximity to the state's heaviest concentration of specialty and sub-specialty medical and hospital resources. Yet they tended to rely on outside resources in a significant manner.

During the past several years a number of Mississippi's smaller rural hospitals have closed, or altered the services they offer. Information from the Mississippi Hospital Association indicates that approximately forty five of this state's hospitals are losing money or are having significant financial difficulties.<sup>2</sup> If the availability of hospital resources becomes more strained, there will be an additional impact on referring physicians which may alter existing patterns. This study provides baseline data by which future changes may be monitored and studied.

2500 North State Street (39216)

## References

1. Kemp, M and Gunter, N. 1988 Report on Hospitals. Mississippi State Department of Health, Jackson, MS 1989(35)
2. Cameron, Sam. Private Communication 1989.

*David E. Bussone is Director, The University Hospitals and Clinics, The University of Mississippi Medical Center.*





## The President's Page

JAMES C. WAITES, MD

### Address to the House of Delegates

**H**elen Keller was once asked what it was like to have been born blind. She replied, "It would be much worse to have been born with sight and have no vision". Her response should prompt each of us to examine ourselves, our practice and our profession to determine if we are fulfilling the vision we once had and should still have today.

In reading through several prior presidential remarks to this House, I was impressed by the visionary thoughts of each president. We have truly been well-served by our past presidents. Each has stressed the ability and the potential, of the House of Medicine in Mississippi, the *power* that we hold, but do not often utilize, and warned us of what would happen if we did not inform ourselves and unite ourselves in the common good.

These remarks caused me to examine my own philosophy, and what I would say to you today. It is readily apparent to anyone who takes notice, that we are all far more alike than we are different. We are independent, intelligent, opinionated thinkers, who want to practice our profession, medicine, as we understand it should be, not as some third party tells us it has to be. The majority of physicians are not in the profession solely for monetary reward, but for the satisfaction of helping another person, our patients. And yet, we are singled out as the *cause* of rising health care cost, and admonished that we must do something about this escalation of costs.

Costs are out of control, but *we* are no longer *in control*. Today politicians, business men, the insurance industry and even our hospital administrators are grabbing for control of health care. With these changes comes apprehension for all of us. We are losing prestige and security. Is it any wonder that substance abuse and family stress and breakdown is such a problem for physicians and their families?

In addition to costs, we have the challenges of our public image, professional liability, access to medical care, and rationing which is surfacing daily.

Change is occurring, but with change, there can be opportunity. At this time, only physicians are licensed to practice medicine. We must show our

(Continued on page 185)



## Family Reunion

Every summer we physicians get together for our reunions. The Mississippi State Medical Association meeting is great and has something for almost everyone. The specialties get together and have their related lectures and their parties. The alumni of many of the medical schools get together and do their thing of R and R (Reminiscing and Raising money). In effect, everyone has a good time, renews old acquaintances and learns some thing as well.

Forgive my indulgence, but the one that I enjoy the most is our own Mississippi Academy of Family Physicians meeting. It is truly an annual homecoming for the state family physicians and their spouses and families as well as the pharmaceutical representatives and their families.

I have grown older with a lot of the physicians and pharmaceutical representatives. I now see younger physicians and Reps. work toward lasting friendships. My children grew up with their children and so the trend goes on. At these meetings everyone seems to have a nice warm friendly "glow". No one is better than anyone else and although there may be differences, we are all devoted to helping one another learn a lot and at the same time have a good time.

It really doesn't matter where our annual meeting takes place -- Mississippi coast, Alabama coast, or in Jackson, we seem to all congregate and all have a good time as people at family reunions should.

This year, I believe, will be the best homecoming for us of all. It will be held this time in Biloxi at the Holiday Inn/Beachfront Coliseum Complex from July 31st through August 4th. There will be lectures for everyone on almost every subject -- even the pharmaceutical representatives are invited to attend if they so desire. The subjects range from chest, stomach, and thyroid disease to Day Care children's problems, philanthropy, and impotence. The speakers are from home and far away and are considered to be top notch in their fields. There will be plenty of time for learning and plenty of time for playing.

Thank God I am a physician and that I can go to

that annual MAFP house-party. Everybody is invited so y'all come on down. See you there.

Joe Johnston, MD  
Associate Editor

## Guest Editorial

An article appears on page 171 of this Journal under the authorship of Mr. David Bussone, director of the University Hospital, which is a "sleeper" in terms of the significance of its message. Chances are that you might have passed it over or browsed it only enough to conclude that it is just another recitation of dull statistics. It isn't dull and it isn't insignificant if you value the economic health of the State of Mississippi. Read it again if you failed to get that message.

Health care is approximately a four billion dollar industry in Mississippi. As estimated thirty per cent of money spent by Mississippians to purchase health care is spent out of state. In the poorest state in the nation, a staggering one billion dollars per year, more or less, of economic leakage is being ignored by people who have the power to do something about it, notably, politicians, businessmen and medical professionals. This amount of money spent inside of the state on health care would generate nearly 175 million dollars in tax revenue to the General Fund, not to mention myriad other benefits.

An additional several hundred million dollars per year of federal money which has been available through the Medicaid Program has been unclaimed for years because of our failure to provide an adequate state match to support needed expansion of eligibility and more equitable reimbursement rates. Let me give you a couple of "real world" examples. The modest expansion of Medicaid which was finally wrung out of the Mississippi State Legislature in 1989 resulted in an increase of \$8,309,228 in Medicaid payments to the University Hospital alone in eleven months from

*(Continued on page 182)*



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# AMA Delegates Report

**George E. Magee, MD**  
**Hattiesburg, Mississippi**

MSMA's delegation to the AMA House of Delegates is composed of physicians from across the state who, in my opinion, "do our state proud" in its conduct and representation of Mississippi physicians at the AMA's national meetings. It has been my privilege to be part of this group for the last two years. Previous articles written by members of the delegation have outlined the commitment of time and effort made by our representatives to the "House of Medicine", and I can only echo their comments. In particular, however, I would like to express appreciation to Dr. Sidney Graves who serves as chairman of our delegation. He is the person we all turn to when we have questions about how to get things done. His knowledge of the workings of the AMA is surpassed only by the respect he has rightly earned from AMA officials and other delegations from all over the country, and we are proud that he leads our delegation.

Many important issues will be discussed and decided upon at the upcoming annual meeting of the AMA's House of Delegates in June. I would like to focus on two issues that are important to all of us. The way organized medicine has handled these two issues, however, points out the importance of communicating and debating differences within medicine to attempt to come to a consensus and present a united front to those forces outside medicine that wield much power over what happens to our profession.

Professional liability problems continue to rank high among physician concerns. The AMA and a broad base of specialty societies, though many months of cooperative effort and a lot of hard work, have formulated a proposal that would remove professional liability from the court system and place it in an administrative, fault-based system. This AMA/Specialty Society proposal has received broad support from organized medicine. Through funding provided by several sources, including the AMA, specialty societies, private insurance groups, and the U.S. Department of Health and Human Services, Georgetown University has conducted a comprehensive analysis of this proposal. It was my privilege to serve as one of two physicians on their advisory committee for this project. I am not currently able to discuss details of the study because of an agreed embargo date; however, I can report that I am extremely pleased with what I believe they will be saying. With "non-partisan" academic support for such a proposal, I believe trial implementation of

such a program will be stimulated. This proposal goes a long way towards making the professional liability arena much fairer for both patients and physicians. Only because of broad-based participation and support by organized medicine was this proposal able to be developed. The AMA has done an admirable job in organizing this, and we can credit the House of Delegates for giving direction for such a proposal to be developed.

Another item of concern is physician payment. With Congressional adoption of the RBRVS system, dramatic changes in the way doctors are paid by the Medicare program are soon to begin. Unfortunately, the broad consensus that we saw in the area of the professional liability project did not occur within organized medicine in this area. Marked differences in opinion regarding payment mechanisms could be expected among the various medical specialties. However, what we saw as the discussion on this subject evolved made me, frankly, ashamed. My own specialty society, the American College of Surgeons, refused to participate in the discussion in the one place we as physicians can call our own, the AMA House of Delegates. The ACS has refused to send a delegate to the HOD for 10 years, and all physicians, not just surgeons, are worse off as a result. Instead of airing our differences among ourselves and coming up with a plan that compromised in such a way as to obtain broad-based support, organized medicine split and went before Congress with all of our difference. Needless to say, Congress saw its opportunity and has taken advantage of this split. An aide to a senior ranking member of one of the Senate committees that deals with health care issues told me recently that some "anti-medicine" members and staff are ecstatic over the "split" that has occurred in medicine and are planning to exploit it in as many other areas as possible. I hope we can get our act together again, and soon.

The "take-home" message should be clear to us. By working within organized medicine and its democratic processes, physicians as a whole will be benefited. Not that every single physician will always get what he or she wants, but that the profession as a whole will be stronger by consensus. The AMA House of Delegates offers us the opportunity to develop this type of consensus. The AMA is far from a monolithic structure. It is an organization that arises from the grassroots of physician organizations across the country and is directed in the broadest sense by the democratic body representing these physicians and organizations -- the House of Delegates. Help us be more effective in representing you by sharing your ideas, criticisms, and constructive thought.



July 1, 1989 to May 31, 1990 compared to the same period in 1988 through 1989. The net cost to our taxpayers, according to the formula provided by economist Daniel K. Lee, was a mere \$336,621. A memorandum from Will Lowery, Deputy Director, Division of Medicaid dated April 19, 1991 states that Medicaid expenditures in March, 1991, were \$63,423,193, which is an increase of \$11,557,199 (22.28%) over March, 1990. These are alarming figures in a time of budget, crisis, right? But, wait a minute. Didn't we buy something of value with all that money? And how much did it really cost? The truth of the matter is that only \$2,625,627 (27.7%) of the increase was provided by the State. The Federal government furnished \$8,931,572 (77.3%). That extra \$11,557,199 which was spent can be expected to return \$1,996,079 in taxes to the General Fund over the tax cycle because of the increased economic activity which it will generate. The net cost to the State of Mississippi when all is said and done will be only \$468,202. The Federal government has budget problems, true enough, but solving those problems is not the official responsibility of the Mississippi State Legislature; especially at the expense of their rightful constituency.

The health care industry represents a tremendous potential for economic development in Mississippi both through public and private programs. In August, 1987, a small group of us representing Mississippi State Medical Association, Mississippi Hospital Association, and the Mississippi State Board of Health met with a committee of the Mississippi Economic Council to advance this idea. In December, 1988, we tried again when Charlie Mathews and I met with Mac Holladay, the new Director of the Office of Economic and Community Development. These meetings turned out to be fruitless, but finally the concept seems to have sparked the imagination of a significant public official. On February 22, 1991, Kane Ditto, Mayor of Jackson, sponsored a Health Care Leadership Forum involving a broad spectrum of community leaders to discuss the future development of the health care industry in the Jackson area. Work groups are currently active. A wrap-up meeting is scheduled for the Fall. The results should be interesting. Mr. Busone's article will be a valuable resource. More such research is badly needed to guide these efforts. My hope is that this visionary activity can eventually be expanded to embrace the entire State since, in so many ways, we are all in the same leaky boat.

W. Lamar Weems, MD  
Jackson, Mississippi

## Letters

### TO THE EDITORS:

In a recent edition of the State Medical Journal I read with some interest the editorial that you have written concerning "A Slice of The Pie." It was interesting to me at least in that the perception you and some people have is that the practice of medicine is a pie and some people would like to have a slice of it. I did have some question as to what kind of pie it was, and that you were disturbed somewhat by the fact that other people were getting a slice of that pie. My inference was that the pie must be pretty good. It should not be surprising to you and others that people enjoy pie or at least where I come from most people with good sense enjoy good pie. However, we could never find very many people at that time or at this time who like to sit down to collard greens and chitterlings. It is possible that what has made the practice of medicine appear pie-like in so far as I can discern is the monetary reward and the only slice of pie that most people want is that part of the pie with the money attached to it. However, they seem to refrain from the collard greens and the chitterlings which may be analogous to all night in Labor and Delivery room with patients and the phone calls all hours of the day and night, which are of course certainly part of the program but I don't see anyone hankering to get into that part of the practice of medicine which is kind of like sitting down, as I say, to collards and chitterlings. If one does not have a taste for it, naturally, or develop a taste for it, you would just as soon move on the pie.

I suppose in part it is someones fault for making it look like a pie and not offering up the collards and chitterlings to some of these folk and the reason why some people saw pie instead of the collards and chitterlings may be due in part to the fault of those folks in the kitchen ... and that is us.

Sincerely,

Perrin N. Smith, MD

P.S. I still enjoy good collards and good chitterlings.

### RESPONSE BY EDITORIAL WRITER:

You missed the point. It was not about money or what's cooking in the kitchen . . . just a simple turf battle. Incidentally (1) I buy my chit'lins on sale at \$3.00 for 10 lbs. (2) I grow my own collard greens and (3) I have already delivered my 2500 babies. Do I get to keep my pie?



## TO THE MSMA:

Thank you for including me on the mailing list for the MSMA Journal and the Newsletter.

I hope we'll be home soon. Hopefully we'll be back in time for the annual convention.

It makes us all feel good to be remembered while we serve here in the desert.

Fortunately we had very few wounded soldiers so we did not have a large number of patients.

Tell everyone at MSMA thanks!!!

Sincerely,  
Bill Whitehead, MD  
Hattiesburg, Mississippi

## TO THE PRESIDENT, MSMA

Dear Dr. Nix:

I appreciate the job you are doing as president of the MSMA this year. I know it requires a great deal of your time and effort.

I received the letter you sent out in reference to the consent law concerning abortions. I don't agree with your conclusions and recommendations.

This law will affect a select group of people, the abortionist, who usually don't have the normal doctor-patient relationship that most physicians have. I believe this law will not only protect them but also allows a true informed decision by the patient.

Sincerely,  
Leroy Howell, MD  
Starkville, Mississippi

## TO THE EDITORS:

Politics, Medicine, and the subject of abortion make for strange bedfellows. Physicians apparently unable to see the proverbial forest for the trees were quick to criticize MSMA's efforts regarding HB 982 to prevent further governmental encroachment on the practice of medicine.

As a family physician who continues to deliver babies and who also counsels pregnant patients seeking pregnancy terminations, I stand to realize the impact of this legislation perhaps more than some of my colleagues. But who knows? Maybe next year's legislative session will feature a bill outlining criminal penalties related to informed consent for cardiac catheterization or vasectomy. Perhaps then the forest will come more sharply into focus.

Sincerely,  
Stanley Hartness, MD  
Kosciusko, Mississippi

## LETTER TO THE MSMA, MSMA Delegates and Alternate Delegates:

My tenure as president of the medical student section of the AMA has come to a close. I'll be moving to St. Louis this June to begin a residency in psychiatry at Washington University. I want to thank you and the rest of the Mississippi delegation for making me feel at home at all of the conventions. I thank the state medical society as a whole too for giving me the opportunity to go to the various meetings.

It has been a good experience in many ways. First of course is that it showed me the value in organized medicine. I had no idea medicine was being assaulted on so many fronts. I, like many younger students, was afraid that the AMA was a large group of professionals controlled by a handful on the board. Instead I found the most democratic group I've had the pleasure to be associated with (this coming from a boy who grew up going to the caucuses of the Mississippi Democratic Party).

It has given me a level of pride in my profession that otherwise would have taken years to develop, particularly when I sat in on some of the House of Delegates debate on the R.B.R.V.S. Most of the discussions centered around the effect any of the changes would have on the patients. We should all be very proud of that.

Leaving Mississippi will not be easy, and after four to five years of training I hope to return. Some of the reasons for coming back revolve around work the medical society has done. We have a good legal environment here secondary to the hard work of the society. Those of us leaving to train often talk about whether or not we will return, and the majority of us appreciate the nice environment here, and hope the reform will continue.

Also, going to the conventions gave me a change to compare our delegation to those from around the country. Let me tell you, I'll be very proud to come back and work with these folks.

For the next few years the medical students will be represented by Russel Betcher (M-3) from the coast and Kirk Mullens (M-2) from Natchez. They have done some great things with the medical student section, and I hope you will welcome them as warmly as you did me. You will enjoy working with them. Again, thank you for the opportunity and the support.

David Sauls (M-4)  
Clinton, MS

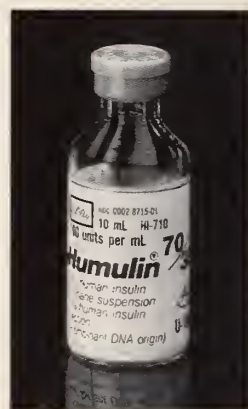


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## Presidents's Page

(Continued from page 1)

potential and our responsibility. We can and must assert our right and obligation to lead new efforts to solve the problems confronting our profession. We must remain loyal to our heritage, to those who have built our great system. American medicine is still considered to be the best available in our world. Today physicians come from all over the world to learn our techniques and treatment methods. This productive, inventive, free-enterprise system of medical care is a heritage from our professional forefathers, and it is our obligation to protect it and further it to the best of our ability. But we must have the honesty to correct the system and police the system when things are wrong with it. We cannot stand still. We must respond with innovation. As Mark Twain is quoted as saying, "You can be on the right track and still be run over, if you are sitting still". Yes medicine is changing, and we have the potential to change with it.

What of our problems, our professional image? Our national image has fallen and is still falling, but our individual image is and remains good. Why do we have this poor image? Perhaps we should heed the writings of the Scottish poet, Robert Burns, when he wrote "Would that God would give us the gift to see ourselves as others see us". We are perceived as greedy, money hungry and selfish. You and I know that that is not true, yet we are told that as a group we give less to charitable causes than almost any other group. We are always *too busy* to become involved in little league, in local schools, in the educational systems, in civic activities, in local government, and in the organized system of medical care. Perhaps, just perhaps, before perception becomes reality, we should get more involved, become more active and counter this negative impression with a positive response.

The solution, our potential. We can and must become active and not always reactive. In our legislative efforts we must develop a long range vision, one that focuses on the issues we support. We must recognize that change is here and assume leadership of it. We can develop coalitions. We can communicate our concerns, even with those who oppose our views and try to develop consensus so that when we approach the legislature, we will be in such a position that they would not dare oppose it. We must always put our patient and his welfare first; they are our best and most supportive allies. As we become more involved in the world around us, we are visible in a

positive way.

Another problem is professional liability. The AMA and MSMA will continue to develop passable and fair reforms. However, as we have already seen, it is not easy to pass tort reform law. Solving the problem will take all of us; physicians, business, insurance, government, patients, even the lawyers, a coalition, if you will. The current tort system is certainly unfair and places undue hardship on medical care. It is also a factor in limiting access to care. We must become politically active, not only with our money, but with our time and personal contacts. Even with reform however, our first obligation is to *police ourselves* and stand up against poor quality in medical care anywhere.

The third problem, as I see it, is health care cost. We have to face the issue squarely. We cannot deny that these costs are escalating at a rate far greater than they should. I, like you, can point out the improved technology, the cost of liability insurance, the aging population, higher labor cost and increased utilization as causes of this increased cost. But to point these out is not enough. Government and business have determined that they will limit what they purchase, and what they are willing to pay for the service. Our training as physicians equips us to help in making the critical and hard decisions that must be made.

Rationing of health care is directly related to this problem and brings many new ethical problems. Who or what will decide who gets health care, the politician or the physician, money or the lack of it, the quality of the life saved or the years of productivity left, age or youth? These are hard questions that will require wise counsel. We must be ready to assist.

The solutions to our problems becomes our vision, our potential. We need each other. We have a great source of strength in the Auxiliary. They not only love us, they support us in our programs. They are involved in politics; they give of their time with health projects; they *work* for us. We can encourage their membership efforts, express our thanks, and become involved ourselves.

We must communicate. Communication always involves at least two, a receiver and a speaker. Lets get on the same wave length and send our message loud and clear; we are together, we are alike, we are involved, we are concerned. Then and only then will our potential, our vision, become reality.

Dr. William Hotchkiss in his inaugural address to the AMA House of Delegates closed with this statement, "As individual physicians, our strength and power



is limited. To illustrate the importance of working together, let me quote from the first verse of Kipling's 'Law of the Jungle'.

'Now this is the Law of the Jungle  
As old and as true as the sky;  
And the wolf that shall keep it shall prosper,  
But the wolf that shall break it must die.  
As the creeper that girdles the tree-trunk,  
The law runneth forward and back....  
For the strength of the pack is the wolf,  
And the strength of the wolf is the pack.'

You see, the definition of potential includes *possibility* which is inherent, latent, promising, and reliable. But it also includes *dormant* which is inactive, inert, latent, on hold, passive, quiet, suspended and unused. Is our potential dormant, inactive or inert? I say no! It is latent, on hold and ready to be unleashed. Every human accomplishment, whether intellectual, physical, or artistic was once in the form of potential, waiting to be released into a recognizable form. Within Handel was the *Messiah*, within Roger Bannister was the first 4 minute mile, within Christian Barnard the first human heart transplant, within Abraham Lincoln there was the Gettysburg Address.

How do you see yourself? I see you as potential - possibility - power. Will this potential remain latent, only possible or dormant waiting to be unleashed, or active and involved? Only you have the answer. I have shared with you my vision, share with me your power. Catch the possibilities of what *can be done*. *Commit yourselves* to provide the leadership that is necessary to protect our patients and provide quality health care for them.

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**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubiaceae and related trees. Also in *Rauwolfia Serpentina* (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it, however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.<sup>1,2</sup> Also dizziness, headache, skin flushing reported when used orally.<sup>1,3</sup>

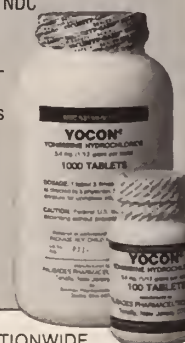
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.<sup>1,3,4</sup> 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.<sup>3</sup>

**How Supplied:** Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

#### References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter. 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **Opinions on Social Policy Issues**

### **Abuse of Children, Elderly Persons, and Others at Risk.**

Laws that require the reporting of cases of suspected abuse of children and elderly persons often create a difficult dilemma for the physician. The parties involved, both the suspected offenders and the victims, will often plead with the physician that the matter be kept confidential and not be disclosed or reported for investigation by public authorities.

Children who have been seriously injured, apparently by their parents, may nevertheless try to protect their parents by saying that the injuries were caused by an accident, such as a fall. The reason may stem from the natural parent-child relationship or fear of further punishment. Even institutionalized elderly patients who have been physically maltreated may be concerned that disclosure of what has occurred might lead to further and more drastic maltreatment by those responsible.

The physician who fails to comply with the laws requiring reporting of suspected cases of abuse to children and elderly persons and others at risk can expect that the victims could receive more severe abuse that may result in permanent bodily or brain injury or even death.

Public officials concerned with the welfare of children and elderly persons have expressed the opinions that the incidence of physical violence to these persons is rapidly increasing and that a very substantial percentage of such cases is unreported by hospital personnel and physicians. An important element that is sometimes overlooked is that a child or elderly person brought to a physician with a suspicious injury is the patient whose interests require the protection of law in a particular situation, even though the physician may also provide services from time to time to parents or other members of the family.

The obligation to comply with statutory requirements is clearly stated in the Principles of Medical Ethics. As stated, the ethical obligation of the physician may exceed the statutory legal requirement.

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### **Allocation of Health Resources**

A physician has a duty to do all that he can for the benefit of his individual patient. To expect a physician when treating a patient to make rationing decisions based on governmental or other external priorities in the allocation of scarce health resources creates an undesirable conflict with the primary responsibility of the physician to his patient.

Societal decisions regarding the allocation of limited health care resources should be based on fair, socially acceptable, and humane criteria. Priority should be given to persons who are most likely to be treated successfully or derive long term benefit. Utility or relative worth to society must not determine whether an individual is accepted as a donor or recipient for transplantation selected for human experimentation, or denied or given preference in receiving costly or scarce health care therapy or resources.

Physicians as citizens have a responsibility to participate and to contribute their professional expertise in decisions made at the societal level regarding the allocation or rationing of health resources.

---





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# Medical Organization

## Dr. Morrison Receives Beaumont Award

Dr. John Morrison, a professor in the Department of Obstetrics and Gynecology, University of Mississippi Medical Center will receive one of five major awards given by the American Medical Association (AMA) at the annual meeting this summer.

Dr. Morrison will receive the Dr. William Beaumont Award during opening ceremonies of the annual convention in Chicago June 23.

The Beaumont award goes to a physician under 50 who "has made an outstanding contribution to medical research, teaching or clinical practice," according to the AMA.

Dr. Morrison, a member of the UMC faculty since 1979, was cited for improving the health of mothers and babies. He has treated and studied patients with sickle cell anemia, an effort which led to his use of transfusion therapy during pregnancy. Replacement transfusions protect the mother from sickling crises and vastly improve the baby's chances of being born healthy.

Much of his work has been in the prevention of premature birth because three-fourths of all infant deaths can be blamed on prematurity. His leadership is the clinical trials which proved the effectiveness of a home monitoring system for patients at risk of delivering prematurely is among his most significant work in pre-term birth.

Dr. Morrison was also a key figure in implementing perinatal regionalization in Mississippi. The concept creates a network of hospitals and health care providers who know about mothers and babies at risk and how to get them to the most appropriate facility.

The Beaumont winner is a native of Hickman, Kentucky. He earned the BS at Memphis State University in 1965 and the MD at the University of Tennessee Center for the Health Sciences in 1968. He completed internship and residency training at the City of Memphis Hospital and served in the US Army at the Fifth General Hospital in Stuttgart, West Germany, from 1973-1965.

Dr. Morrison received the first place research award from the South Atlantic Association of Obstetricians and Gynecologists in 1987. He serves on the policy advisory committee of the *American Journal of Obstetrics and Gynecology*, is on the editorial boards of *The*

*Journal of Perinatology*, *Journal of Maternal-Fetal Investigation*, and *Pediatric AIDS and HIV Infection*, and is a consulting editor for the *New England Journal of Medicine*, the *American Journal of Obstetrics and Gynecology*, the *Journal of Obstetrics and Gynecology*, and the *Southern Medical Journal*.

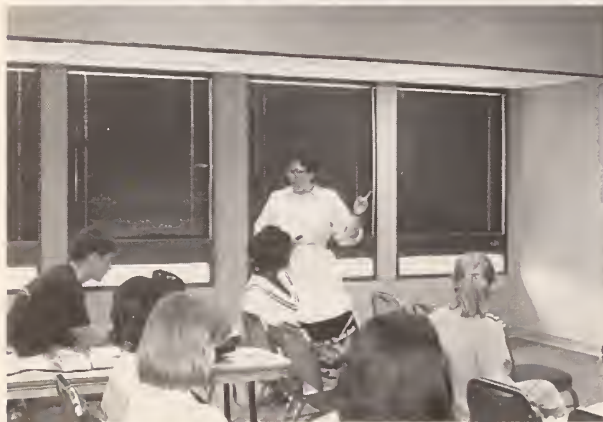
He has been president of the Society of Perinatal Obstetricians, the Southern Perinatal Association, and the Society for Obstetric Anesthesia and Perinatology.

## Mississippi Urological Society Establishes CE Fund

*The Mississippi Urological Society has contributed \$5,000 to establish a continuing medical education fund in urology at the University of Mississippi Medical Center in Jackson. Dr. Lamar Weems, president of the Mississippi Urological Society, right, and Dr. Ronald P. Kruger, secretary and treasurer, center, presented the gift to Dr. Norman C. Nelson, UMC vice chancellor for health Affairs.*







## Health Choice 91

On April 5, in Hattiesburg, Mississippi State Medical Association and the Mississippi State Medical Association Auxiliary presented its first annual youth health seminar. This seminar entitled Health Choice 91 was held in the Union on the campus of the University of Southern Mississippi.

The ninety-five student participants were from six of the Mississippi junior and senior high schools that participated in the comprehensive health education pilot program. Counting students, teachers, parents, speakers, and auxiliary members about 200 people took part in making Health Choice 91 a great success.

Health Choice 91 was designed to reinforce the positive attitudes toward health presented in the pilot program.

The keynote speaker was JeVon Thompson. Since 1980 he has spoken to over 4 million people as an international speaker traveling throughout the United States and Canada. His unique style has been featured on television specials with Oprah Winfrey, World News Tonight, and an ABC soap opera. From his New Jersey high school, through college in Wisconsin, in which he earned a BA in Psychology, to the rock music scene





touring the United States, JeVon has witnessed and experienced the effects of drug abuse. His mother died from alcoholism. In the Spring of 1980, his brother died from a heroin overdose. JeVon used both of these examples including his own experiences with drugs to talk with our Health Choice participants about "Attitude! Power! and Self Esteem!"

During his ninety minute presentation JeVon had everyone involved with building and maintaining positive attitudes and relationships.

Students also had the opportunity to participate in an aerobics exercise session with the UMC cheerleaders.

Refreshments for breaks and lunch were prepared and served by members of the MSMA Auxiliary. Central Auxiliary prepared delicious heart healthy muffins and a selection of fresh fruits which they served during registration. South Mississippi Medical Society Auxiliary Health committee members helped prepare and serve a wonderful sack lunch for everyone to enjoy.

Students then had the opportunity to participate in a Health Fair. Eighteen booths were set up to provide information on subjects ranging from blood pressure to

hearing testing. The health fair was one of the favorite student activities of the day. Students requested more time and more exhibits for next year.

The afternoon was filled with small group sessions. Students and teachers were divided into six groups and heard speakers on the following topics: *Straight talk on teenage sexuality and pregnancy* led by Dr. Helen Barnes, *A guys legal responsibility in teenage sex and pregnancy* led by Hattiesburg attorney Steve Headrick, *Choice ... Drug Free* led by Jim Fuller and Rusty McDaniel of DREAM, *The Facts .. STD and AIDS* led by Dr. Nancy Tatum, *Steroids and Fitness* led by Jim Gallaspy, USM associate professor of sports administration and for teachers *Why kids on drugs can't be effectively taught.*, led by JeVon Thompson.

The day's activities concluded with a presentation by Dr. Gene Barnes on *Becoming A Person*.

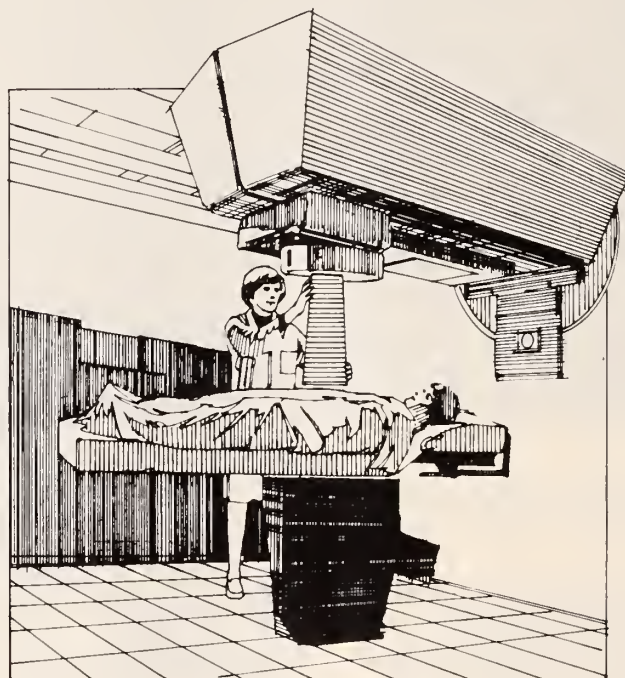
Health Choice 91 was a great success and the teachers and their classes are looking forward to participating again next year.

Dr. Ginny Crawford and her planning committee did a great job of not only developing the program but making meeting arrangements and securing speakers.



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## Dr. John Eichhorn Joins UMC Staff

Dr. John H. Eichhorn has been named professor of anesthesiology and chairman of the department in the School of Medicine at the University of Mississippi Medical Center, effective April 1.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs and dean of the medical school, announced his appointment following approval of the Board of Trustees of State Institutions of Higher Learning.

"Dr. Eichhorn is a distinguished anesthesiologist who brings excellent experience and credentials in academic medicine to the Medical Center," said Dr. Nelson. "We are pleased to have a physician of his caliber join us in this important role."

Dr. Eichhorn was graduated in 1969, magna cum laude, from Princeton University and earned the MD, cum laude, in 1973 at Harvard Medical School. He took his internship in surgery and residencies in surgery and anesthesia at Beth Israel Hospital in Boston, MA, where he was chief resident in anesthesia. He also took clinical fellowships in surgery and anesthesiology at Harvard Medical School.

After serving as a commissioned officer in the United States Public Health Service at the National Institutes of Health from 1976-1978, Dr. Eichhorn joined the Harvard Medical School faculty as an instructor in anesthesia. He quickly rose through the ranks to become assistant professor in 1980 and associate professor in 1989, a position he held until coming to the Mississippi Medical Center.

Dr. Eichhorn also had been a member of the medical staff at Beth Israel Hospital since 1979, and had been associate anesthesiologist since 1985.

Dr. Eichhorn serves on the National Committee for Clinical Laboratory Standards and the Administrative Board of the American Thoracic Society Blood Gas Proficiency Program. He also is an oral examiner for the American Board of Anesthesiology and question writer for the Joint Council on In-training Examination.

A member of several editorial boards, Dr. Eichhorn is editorial board chairman and director of the Anesthesia Patient Safety Foundation and co-founder and secretary of the International Task Force on Anesthesia Safety.

## Mississippi ACOG Officers



*Officers of the Mississippi Section of American College of Obstetricians and Gynecologists (ACOG) are Dr. Swan Burrus of Tupelo, center right, chairman; Dr. Fred Ingram of Jackson, right, vice-chairman; and Dr. Darden North of Jackson, not shown, secretary-treasurer. Dr. Richard "Pete" Hollis of Amory, center left, is ACOG District VII chairman, and Dr. George Morley, left, is a past president of ACOG.*

## Wiser Society Makes Past ACOG President Honorary Member

*Below, Dr. George W. Morley, right, a past-president of ACOG, received honorary membership in the Wiser Society, named in honor of Dr. Winfred Wiser, center, chairman of obstetrics and gynecology at the University of Mississippi Medical Center. Dr. Joel Payne of Jackson, left, is president of the Wiser Society. Dr. Morley is associate chairman of ob-gyn at the University of Michigan Medical Center in Ann Arbor and gave the Wiser Society Lecture.*





# Medical Society News



*Dr. George C. Furr of Clarksdale, member of the MSMA Environmental Protection Council speaks with another participant during the pesticide meeting.*

## Pesticides, Medical Management and You

Delta State University was the site for a workshop entitled Pesticides, Medical Management and You held on April 10. This seminar was sponsored by several organizations, among which were **Clarksdale and Six Counties Medical Society, Delta Medical Society and the Mississippi State Medical Association.** The workshop addressed issues concerning the history of pesticide applications in the Delta and their affects. There was also an overview of pesticide development from the manufacturers standpoint. The second portion of the workshop dealt with medical considerations and the long-term implications of pesticide use. The session was well attended.



*Participants at the Pesticides Medical Management and You Workshop*





*Dr. Jimmy Waites and his wife Jo were guest of Dr. Richard Field, Jr. at the Amite-Wilkerson Medical Society and Field Memorial Community Hospital's 13th Annual Lectureship on Thursday, April 18 in Centreville. The guest lecturer for the meeting was Dr. Oliver Behrs speaking on the history of the Mayo Clinic.*



*Dr. and Mrs. Jim C. Barnett of Brookhaven are pictured with Governor Ray Mabus as he signs a Doctor's Day Proclamation.*



## New Members

**Alexander, Lon F.,** Jackson. Born Atlanta, GA, May 1, 1956; MD Louisiana State University School of Medicine, New Orleans, LA, 1984; interned one year, neurosurgery residency 1985-90, fellowship in endovascular & cerebrovascular surgery 1990-91, University Medical Center, Jackson, MS; elected to membership by Central Medical Society.

**Ball, Sheldon S.,** Jackson. Born Wurzberg, Germany, September 19, 1951; MD University of Miami School of Medicine, Miami, FL, 1983; interned and pathology residency University of California at Los Angeles Medical Center, Los Angeles, CA, 1983-87; fellowship, Yale University, New Haven, CT, 1988-90; elected to membership by Central Medical Society.

**Dodson, F. Moncreif,** Jackson. Born Rome, GA, June 16, 1952; MD Medical College of Georgia, School of Medicine, Augusta, GA, 1977; interned and pediatrics residency University of Louisville, Louisville, KY

1977-80; fellowship in neonatal/perinatal medicine 1983-85; elected to membership by Central Medical Society.

**Eichhorn, John H.,** Jackson. Born Cleveland, OH, May 13, 1947; MD Harvard Medical School, Boston, MA 1973; interned one year Beth Israel Hospital, Boston, MA; clinical fellow in anesthesia & clinical fellow in surgery, Harvard, Boston, MA, 1973-75; anesthesiology residency Harvard & Beth Israel, Boston, MA, 1975-79; elected to membership by Central Medical Society.

**Hensley, Samuel D., Jr.,** Jackson. Born Charleston, WV, April 27, 1953; MD West Virginia University School of Medicine, Morgantown, WV, 1979; interned and pathology residency, Wilford Hall USAF Medical Center, Lackland AFB, TX, 1980-83; fellowship in neuropathology at Armed Forces Institute of Pathology, Washington, DC, 1983-85; elected to membership by Central Medical Society.

**Magiros, Eva,** Gulfport. Born Baltimore, MD September 30, 1951; MD Medical College of Virginia Commonwealth University School of Medicine,

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## New Members/continued

Richmond, VA, 1978; interned and medicine residency Union Memorial Hospital, Baltimore, MD, 1977-81; elected to membership by Coast Counties Medical Society.

**Mullen, Paul E., II**, Gulfport. Born San Antonio, TX, January 3, 1954; MD University of Maryland School of Medicine, Baltimore, MD, 1981; interned and medicine and cardiology residency University of Maryland, Baltimore, MD 1981-86; elected to membership by Coast Counties Medical Society.

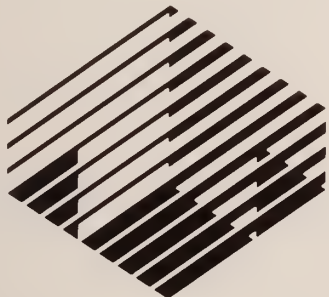
**Porth, Jeffery David**, Vicksburg. Born Jefferson, LA., January 9, 1959; MD Louisiana State University School of Medicine, New Orleans, LA, 1986; interned and anesthesiology residency, Charity Hospital, New Orleans, LA, 1986-90; elected to membership by West MS Medical Society.

**Ray, Tapati**, Jackson. Born Calcutta, India, March 7, 1944; MD Sir Nilratan Sircar Medical School, University of Calcutta, India 1969; interned 1977-78 Morristown Memorial Hospital, Morristown, NJ; anesthesiology residency University of Medicine and Dentistry of New Jersey, Newark, NJ 1980-83; fellowship Albany Medical Center, Albany, NY 1979-80; elected to membership by Central Medical Society.

**Velasco, Diego J.**, Philadelphia. Born Cuba, May 22, 1942; MD Universidad Complutense, Madrid Spain, 1968; interned, general surgery residency and colon & rectal surgery fellowship, Deaconess Hospital, Buffalo, NY 1970-76; elected to membership by East MS Medical Society.

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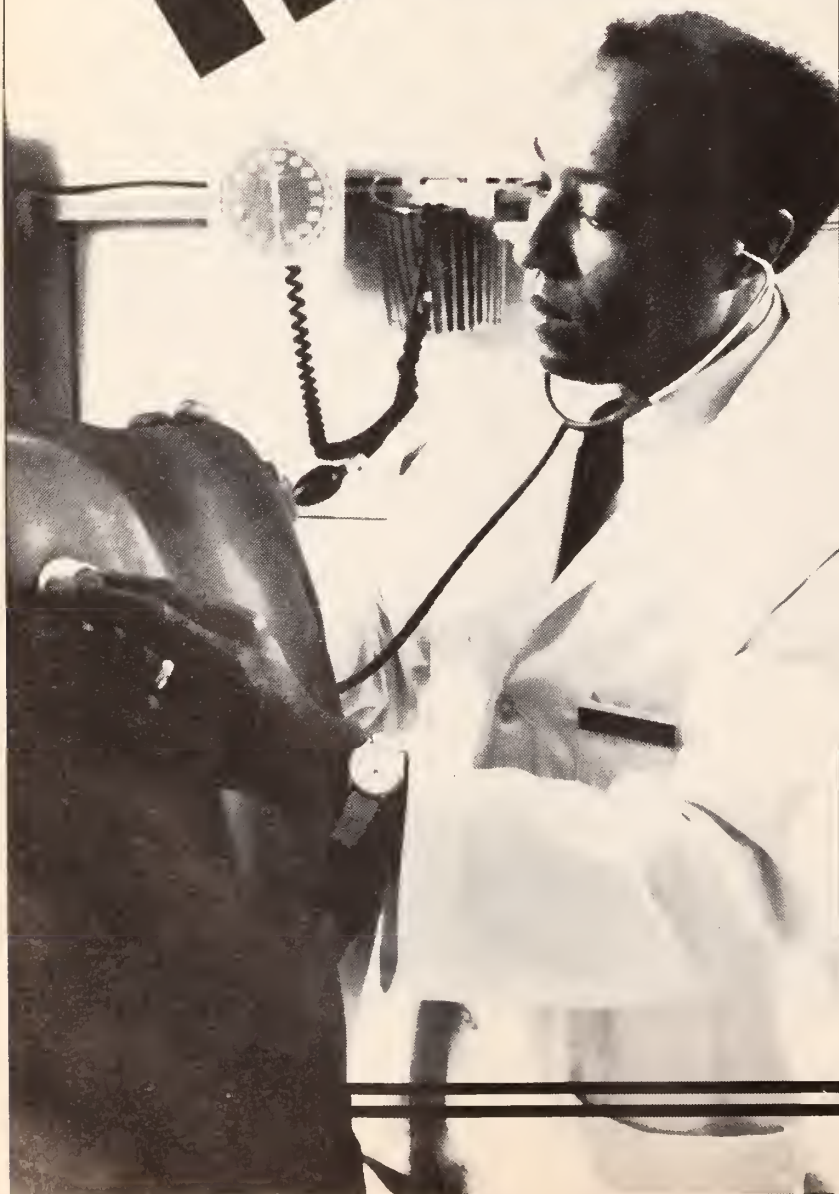
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# JOURNAL

OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

JUNE

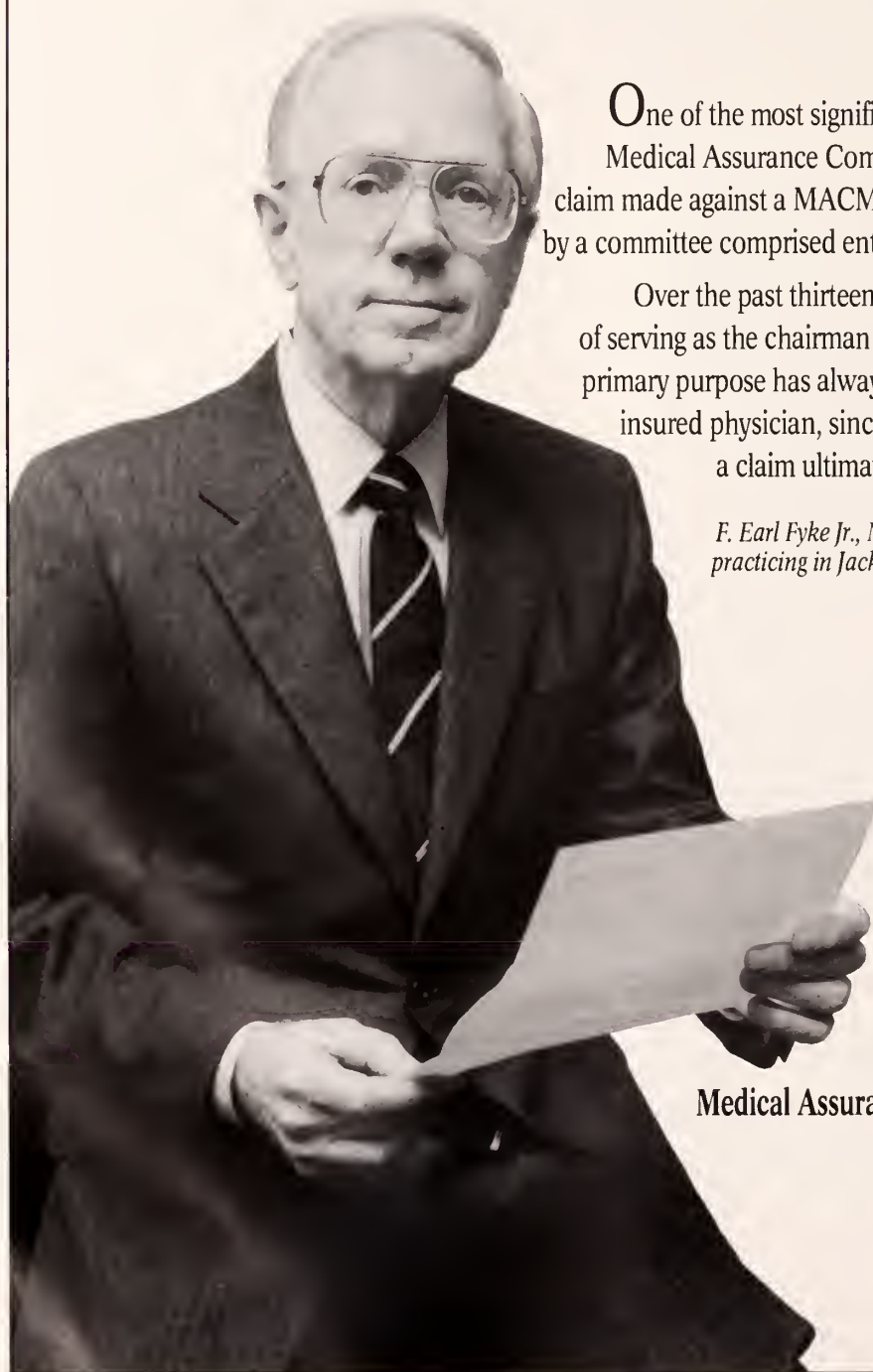
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OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

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NUMBER 6

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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 6

June 1991

Dear Doctor:

This issue of the *Journal MSMA* contains highlights and photographs of the 123rd annual session held May 15-19 in Biloxi, MS.

Dr. James C. Waites of Laurel was inaugurated as MSMA's 1991-92 president and Dr. William C. Gates of Columbus was elected president-elect of the association. Serving as officers of the Board of Trustees during this association year are: Chairman Dr. Fred L. McMillan of Jackson representing district 4, Vice-Chairman Dr. Mal G. Morgan of Natchez representing district 7 and Secretary Dr. Stanley A. Wade of Meridian representing district 2.

Newly elected board members are: Michael G. Carter, MD, Greenwood representing district 1 and Leonard H. Brandon, MD, Starkville representing district 3. Other members of the Board are: Stanley Hartness, MD of Kosciusko representing district 2; John P. Lee, MD of Forest representing district 4; Eric E. Lindstrom, MD of Laurel representing district 6 and David L. Clippinger, MD of Gulfport representing district 8. Also meeting with the Board will be Dr. James C. Waites MSMA president; Dr. William C. Gates president-elect, and J. Elmer Nix, MD of Jackson immediate past president.

Dr. J. Elmer Nix's presidential address is printed on page 217 of this issue and highlights of the House of Delegates are printed on page 235.

For those physicians who attended the Medicine Plenary Session, MSMA has received a copy of Dr. Tom Frank's handout material on New Drugs 1991. If you would like a copy please call or write the editor, *Journal MSMA*, PO Box 5229, Jackson, MS 39296-5229 or call 800-898-0251.



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# Dateline

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Journal of the Mississippi State Medical Association  
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## State Infant Death Rates Drop

Jackson, MS - Officials say infant mortality dropped from 38 percent from 1979 through 1989, thanks to better medical care for Mississippi babies and pregnant women.

"We've made tremendous progress," Dr. Alton Cobb, state health officer, said.

After decades near the bottom, Mississippi ranks 42nd among states in infant mortality for 1989, according to preliminary findings of the state's Infant Mortality Task Force.

The findings issued are based on an analysis of state Department of Health records and federal statistics.

In 1979, 809 Mississippi infants died before age 1, a rate of 17.9 per 1,000 live births, the task force said. In 1989, 498 infants died, a rate of 10.8 per 1,000 live births.

The national rate for 1989 hasn't been issued by the Center for Health Statistics in Landover, MD, but was 10 per 1,000 live births in 1988.


## Health Care Reform Proposal

Washington, DC - As an alternative to more extensive health care reforms, two key House of Republicans have introduced a bill that would reform the small-business insurance market and require employers to make a group health plan available to their workers. The plan from Connecticut's Nancy Johnson and Rod Chandler of Washington State also would provide up to \$300 million a year for expanding community health centers to serve those who can't afford the employer-based plan.

## Medicaid Costs Studied

Washington, DC - Large and unexpected jumps in state and federal Medicaid costs have triggered a top-level management review by the Office of Management and Budget and HHS. The anticipated costs of the federal share of the program in fiscal 1992 have climbed from \$49.5 billion as projected in January 1990 to almost \$65 billion in the most recent projections.



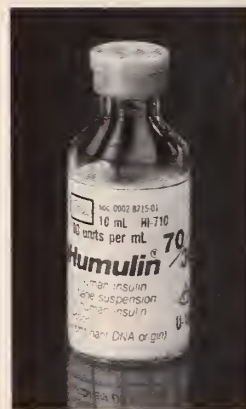


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# Bone Marrow Transplantation: A New Treatment Approach for Mississippians

CAROLYN L. BIGELOW, MD  
JOE C. FILES, MD  
Jackson, Mississippi

**B**one marrow transplantation (BMT) is increasingly used in the treatment of immune deficiency disorders, acute leukemia, chronic myelogenous leukemia, lymphomas (Hodgkin's and non-Hodgkin's) and solid tumors such as neuroblastomas and breast cancer.<sup>1-4</sup> The frequency of BMT has risen from 200 cases annually worldwide in the 1970's to close to 5,000 performed in 1989 alone.

With the widening application of bone marrow transplantation for the treatment of malignancies and the capability of performing bone marrow transplants at the University of Mississippi in the near future, there is a need for physicians in Mississippi to become familiar with indications for transplantation as well as the procedure and its complications.

### Indications

The pediatric indications for bone marrow transplantation include acute myelogenous and acute lymphoblastic leukemia in relapse or primary refractory disease. The solid tumor, neuroblastoma, is a common indication for marrow transplant in this population of patients. Immune deficiency diseases, such as severe combined immunodeficiency, can also be cured with bone marrow transplantation.

The adult indications for BMT include refractory or relapsed acute myelogenous and lymphoblastic leukemia, chronic myelogenous leukemia in chronic, ac-

Bone marrow transplantation makes it possible to treat patients with malignancies using doses of systemic chemotherapy and/or radiotherapy that otherwise would result in fatal hematologic toxicity. This approach has found its widest application in the treatment of hematologic malignancies, but it is also being used for aplastic anemia, severe immunodeficiency diseases, and selected solid tumors. The University of Mississippi will soon (October, 1991) be able to offer this treatment approach to Mississippians; therefore the indications, the general technique, and results of transplantation for a variety of diseases are reviewed herein.

celerated or blast crisis phase, relapsed or refractory non-Hodgkin's and Hodgkin's lymphomas, preleukemic or myelodysplastic syndromes, and certain solid tumors such as breast and melanoma. The non-malignant indications include aplastic anemia, severe immune deficiency disease and less often thalassemia major and enzyme disorders such as the mucopolysaccharidoses.

Patients generally must be less than 55 years old,



have a good Karnofsky performance status, and have no concurrent liver disease, renal failure or heart failure. They must also have an HLA-matched sibling for allogeneic transplants and not have tumor involvement of the marrow for autologous transplants.

### Donors

Three different kinds of transplants can be performed: 1) autologous 2) syngeneic and 3) allogeneic. In an autologous transplant, the patient's own marrow is withdrawn, treated with monoclonal antibodies or chemotherapy if necessary, and then reinfused into the patient (recipient) after he has undergone chemoradiotherapy. Syngeneic transplants utilize a genetically identical twin for the marrow donor. Allogeneic transplants utilize a sibling, or occasionally a parent, who is matched with the recipient for the transplantation antigens, or human leukocyte antigens (HLA). HLA-identity means being identical for the HLA-A, -B and -DR loci by serotyping and being identical at the HLA-D locus by the mixed leukocyte culture technique. There is a 25% chance that any two siblings will be HLA-matched, thus only about 35%-40% of patients will have an HLA-matched sibling.

In order to enlarge this donor pool, BMTs are being performed between incomplete matches and also between unrelated HLA-matched donors.<sup>5</sup> The University of Mississippi transplant team will only perform transplants between HLA-matched donor and recipients.

### Preparative Regimen

Marrow transplantation for malignancy begins with high dose chemoradiotherapy. The purpose of this treatment is to eradicate malignant cells and immunosuppress the host to avoid graft rejection. The most common preparative regimen includes cyclophosphamide 60 mg/kg on two successive days, followed by total body irradiation of 1000-1500 cGy. Other chemotherapeutic agents such as busulfan, cytosine arabinoside, VP-16 and Thiotepa are being studied as alternatives to the standard regimen.<sup>6</sup>

### Transplant Procedure

The marrow is obtained from the donor under general or spinal anesthesia by repeated aspirations from the iliac crests. The marrow is collected in heparin to avoid clotting, screened to remove bone particles and infused intravenously into the recipient just like a blood transfusion. Prior to infusion the marrow may be treated with monoclonal antibodies or chemotherapy to remove malignant cells in the case of autolo-

gous transplantation or it may be treated to remove red cells if an ABO incompatibility exists between donor and recipient in the allogeneic setting.

### Engraftment

It usually takes two to four weeks for the transplanted marrow to *home* to the appropriate place and regenerate enough cells to restore peripheral blood counts. This period of pancytopenia is critical because infections can occur as well as bleeding. Broad spectrum antibiotics and antifungal agents are used if necessary. Blood product transfusion, especially platelets, are utilized as well. The mean time for the granulocyte count to return to 500/mm<sup>3</sup> is twenty days with platelet and red cell production returning later.

## COMPLICATIONS OF TRANSPLANTATION

### Chemoradiotherapy Toxicity

After high dose chemotherapy and radiotherapy patients can expect some degree of nausea and vomiting. Fever, parotitis, skin erythema, hair loss, mucositis and hemorrhagic cystitis are all possible complications as well. Fluid balance is critical during this time and intravenous hyperalimentation is necessary to maintain a positive nitrogen balance.

### Graft-Versus-Host Disease

One of the most important complications of allogeneic bone marrow transplants is graft-versus-host disease (GVHD). The graft detects foreign antigens of the host and attacks the recipient's tissues causing skin rashes, diarrhea and liver dysfunction. Approximately 40-60% of patients will develop acute GVHD even from an HLA-identical sibling. The clinical manifestations of GVHD can range from a mild, self-limited skin rash to devastating and fatal liver failure or bloody diarrhea.

To prevent GVHD immunosuppressive drugs such as methotrexate and cyclosporine are administered after marrow infusion.<sup>7</sup> In the first three months after transplant, acute GVHD develops and can be treated with cyclosporine, antithymocyte globulin, glucocorticoids or monoclonal antibodies. After three months, a chronic form of GVHD may develop which can be treated with a combination of cyclosporine and glucocorticoids.

### Opportunistic Infections

Due to the patients immunocompromised state secondary to neutropenia and immunosuppressive drugs,



an increased susceptibility to infection occurs. Immediately after transplant bacterial infections are common; whereas, during the second or third week of neutropenia, fungal infections are problematic. Broad spectrum antibiotics and antifungal drugs, such as Amphotericin B and the newer fluconazoles, are utilized during this time period. *Pneumocystis carinii* is rarely a problem anymore due to the prophylactic use of trimethoprim-sulfamethoxazole. Cytomegalovirus (CMV) infections, especially interstitial pneumonia, have been a leading cause of death during the post-grafting immunosuppressive period. Progress in treating this infection has occurred with the use of new antiviral agents such as gancyclovir and intravenous immunoglobulin administration.<sup>8</sup>

### Transplant Results

In patients with hematologic malignancies and aplastic anemia, sufficient numbers of patients have been transplanted to provide data for disease outcome. Published results vary depending on many factors such as: transplanting institution, age of patient, transfusion status of the recipient and donor, CMV status of the recipient and donor, and disease status in the patient, ie. clinical remission, resistant disease, disease which is responsive to therapy. It is therefore difficult to give statistically significant results for any given patient but overall outcomes for disease groups are possible.

### Aplastic Anemia

The initial studies in patients with aplastic anemia involved allogeneic transplantation in multiply transfused patients who were often infected and often refractory to platelet support. Even with such poor candidates, approximately 45% of the patients became long-term survivors. The major determinant of failure in this initial group was non-engraftment secondary to immunization from prior blood transfusions. Efforts to improve this 30-35% nonengraftment rate have been the major focus in the attempt to improve the results in patients with aplastic anemia.

Transplantation of untransfused patients improved the results significantly with only a 5% non-engraftment rate and an overall survival of 80-85%. Utilization of buffy coat infusions from donor peripheral blood increased the cell dose given to the recipient and this decreased the non-engraftment rate, but increased the severity of graft vs host disease. Currently, the standard immunosuppressive regimen for aplastic anemia includes cyclophosphamide 50mg/kg for four consecutive days with or without the addition of antithymocyte

globulin.

Although results vary from center to center, the survival of patients with severe aplastic anemia are superior to supportive care and/or androgen therapy alone.

### Acute Leukemia

Acute nonlymphocytic leukemia (ANLL) patients were initially transplanted in first remission with long term survival rates of approximately 50%. Due to the extreme difficulty in defining appropriate control groups, it has been impossible to document a statistically improved outcome for these patients compared to patients treated with conventional aggressive chemotherapy. Concern over the fact that a significant number of the patients cured by transplantation were already cured by the initial chemotherapy is also a complicating factor. Presently most programs are recommending ANLL patients undergo transplantation as early as possible after relapse is documented. Long-term survival rates of 25-30% are to be expected. This group of patients plus the patients cured with chemotherapy alone give statistically equal or superior results compared to transplantation in first remission without the concern of exposing "chemotherapy cured" patients to transplant morbidity and mortality.

### Chronic myeloid leukemia

Unlike acute leukemia, chronic myeloid leukemia (CML) at present is felt to have no potential for cure with chemotherapy. Therefore, transplantation appears to be a rational treatment approach, especially in young patients. Results vary depending on disease and disease status at the time of transplantation.

Patients transplanted in chronic phase have a better statistical outcome than patients transplanted in accelerated phase or overt blast crisis. Patients transplanted in controlled chronic phase can be cured 50-60% of the time; in transition, results fall to 20-25%; and in overt blast crisis only 10-15% will be long-term survivors. With the present state of understanding of the disease process, we feel all patients with CML < 50 years of age should be offered the choice of transplantation if a suitable donor can be found.

### Lymphoma

Both Hodgkin's and non-Hodgkin's lymphoma patients are being aggressively transplanted at this time. Patients who relapse after initial therapy for their disease are candidates for transplantation. Ideal marrow source and preparative regimen have yet to be clarified although at present both autologous and allogeneic



marrow produce similar results.<sup>9</sup> Patients with primary refractory disease, relapsed disease which is not responsive to chemotherapy, and patients with bulky disease do poorly. Overall results have indicated that 20-25% of relapsed patients may be cured with this approach.

As more effective conditioning regimens are developed, as supportive care methods are improved, and as understanding and utilization of recombinant growth factors is expanded, results with bone marrow transplantation will continue to improve. This technology offers the potential of cure to a variety of patients with otherwise fatal malignancies.

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## References

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# Cocaine Intoxication in a 12 Month-Old

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WILLIAM ALEXANDER, MD  
Jackson, Mississippi

Cocaine abuse has mushroomed in the United States, with over 30 million people having tried cocaine at least once.<sup>1</sup> Toxicity of cocaine in adults,<sup>1,2</sup> newborns,<sup>3</sup> and infants has been extensively reported. Reports of infant intoxication have involved cocaine ingestion from active administration of cocaine,<sup>4</sup> breast milk,<sup>5</sup> passive inhalation of smoke,<sup>6</sup> maternal nipples (cocaine used by mother for soreness),<sup>7</sup> and cocaine party debris.<sup>8,9</sup> An infant who presented with signs and symptoms of cocaine ingestion, independent of parental use, will be described.

## Case Report

A.D. was a 12 month old black infant brought by his parents to the emergency department for possible poison ingestion. The father reported that the family (parents and children - ten, seven, five, and one year old) had just given a known drug abuser a ride. After dropping off the drug abuser, the parents drove to a shopping center and left the children unattended in the car. When the parents returned approximately one hour later, they noted that the one year old child exhibited unusual behavior, particularly extreme hyperactivity, irritability, and bizarre tongue movements. The mother removed a small piece of white paper from his mouth and immediately drove the infant to the local emergency department.

On arrival at the hospital, the infant was very irritable and hyperactive, frantically moving all extremities and writhing on the exam table. He repeatedly protruded and retracted his tongue, smacking his lips. Vital signs revealed a rectal temperature of 100.5 degrees Fahrenheit, pulse 180, respirations 36, and blood pressure of 117/74. Extraocular movements were intact, with pupils four millimeters and reactive. Deep tendon reflexes were hyperactive and equal bilater-

ally, with no clonus. There was no evidence of trauma, and no seizure activity was noted. The remainder of the physical exam was unremarkable.

Initial laboratory studies included normal electrolytes, blood urea nitrogen, creatinine, calcium, creatinine phosphokinase and glucose. Complete blood count revealed a normal white blood cell count, with hemoglobin of 11.0 g/dl. Urine toxicology screen was positive for cocaine metabolites. Serum cocaine level was 0.204 micrograms/ml.

While in the emergency department, the infant vomited several times. Intravenous fluids were started. Because of his severe hyperactivity, 0.1 mg of Ativan was given intravenously with a decrease in agitation and hyperactivity. A nasogastric tube was inserted for the administration of activated charcoal and magnesium citrate. Charcoal administration was aborted secondary to repeated emesis. Cardiac monitoring in the emergency department revealed sinus tachycardia without ectopy.

The child was admitted for further observation and supportive care. Five hours after arrival he fell asleep and slept the remainder of the night, with full recovery ten hours after presentation. Social services evaluated the home environment and approved discharge to the care of the parents.

## Discussion

Tachycardia, tachypnea, hypertension, irritability, and tremulousness-common signs of infant cocaine intoxication were noted in this case. Seizures often occur<sup>6,7,8,9,10</sup> and have a major effect on mortality.<sup>9</sup> Other reported signs and symptoms of infant cocaine ingestion include diaphoresis,<sup>4</sup> high-pitched cry,<sup>5</sup> vomiting and diarrhea,<sup>5</sup> lethargy,<sup>6,10</sup> poorly reactive pupils,<sup>5,7,9</sup> and hypoventilation with cyanosis.<sup>8,10</sup> Wide complex



tachydysrhythmias<sup>9,10</sup> and bradycardia with hypotension<sup>9</sup> may occur with severe intoxication. With such a wide range of clinical presentations, physicians must be alert to the possibility of infant cocaine intoxication. A thorough history is needed to uncover possible exposure to cocaine. Once cocaine intoxication is considered, a urine drug screen is recommended.<sup>2</sup> The metabolites of cocaine appear in urine within one hour of exposure and may persist for as many as three days.<sup>4</sup> If the urine screen is positive for cocaine, serum can be drawn. Cocaine in the serum indicates exposure within the previous eight hours.<sup>4</sup>

Treatment of oral cocaine intoxication includes induced emesis (or lavage), followed by activated charcoal and a cathartic. Seizures are treated with diazepam (Valium) 0.25-0.4 mg/kg/dose, with the addition of phenobarbital and/or phenytoin (Dilantin) for persistent seizures.<sup>2,9</sup> Hyperthermia must be aggressively treated with external cooling.<sup>9</sup> Tachyarrhythmias respond to propranolol (Inderal) 0.1-0.15 mg/kg/dose over ten minutes, or labetalol (Normodyne, Trandate) 0.25 mg/kg/dose over two minutes, with labetalol preferred in the presence of hypertension to avoid unopposed alpha-adrenergic stimulation.<sup>2,9</sup> Bradycardia and hypotension are treated in the usual manners.

The severity of cocaine intoxication mandates that we protect children from exposure to the drug. Our case has shown that exposure can occur in unexpected ways, independent of parental cocaine use. The parents of A.D. exercised poor judgement, exposing their children to a known drug abuser and leaving the children in a car without adult supervision. Other reported cases of infant cocaine intoxication have involved caretakers either actively or accidentally giving cocaine to infants. The implications of infant cocaine ingestion mandate reporting each case to child protection agencies to rule out abuse.<sup>10</sup> Parents and communities must be educated that infant cocaine ingestion is a poisoning with serious consequences.

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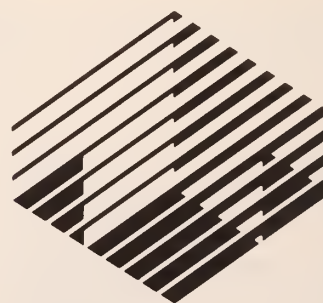
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# Diagnosis and Management of Amenorrhea

G. RODNEY MEEKS, MD  
FREDA M. BUSH, MD  
CALVIN P. POOLE, Jr., MD  
EARL T. STUBBLEFIELD, MD

Jackson, Mississippi

**Dr. Meeks:** D.D., a 25 year old nulliparous white female, presented with the complaint of no periods. How does one approach the patient with amenorrhea?

**Dr. Stubblefield:** Amenorrhea is the absence of menstruation during the reproductive years. A multitude of factors may be associated with this complaint. Traditionally, amenorrhea is classified as primary or secondary. Primary amenorrhea is the absence of menses in a women who has not menstruated by the age of 16.5 years. One must also be suspicious if development of secondary sexual characteristics has not occurred by 14 years of age. Secondary amenorrhea is the absence of menses for six months or longer in an individual who previously has menstruated.

**Dr. Meeks:** How common is amenorrhea and how can it be categorized?

**Dr. Poole:** The incidence of primary amenorrhea is less than 0.1%, and may be caused by gonadal or extragonadal dysfunction. Approximately 60% of cases can be attributed to gonadal abnormalities, which are often associated with abnormal sex chromosome karyotype. Extragonadal anomalies account for approximately 40% of cases. Usually, the gonads are normal but lack proper pituitary stimulation, or a genital outflow tract anomaly is present. (see Table I)

**Dr. Bush:** The incidence of secondary amenorrhea which is not associated with the physiologic condi-

Table I: CAUSES OF PRIMARY AMENORRHEA

<b>Gonadal Dysfunction (60%)</b>
Gonadal Dysgenesis XO (Turner's Syndrome)
Pure Gonadal Dysgenesis XX
XY Gonadal Dysgenesis (Swyer's Syndrome)
Ovarian Insensitivity Syndrome (Savage's Syndrome)
17 Alpha-Hydroxylase Deficiency
<b>Extragonadal Anomalies (40%)</b>
Congenital Absence of Uterus and Vagina
Male Pseudohermaphroditism
Female Pseudohermaphroditism
Hypothalamic-Pituitary Dysfunction (Kallman's Syndrome)

tions of pregnancy or ovarian failure (menopause) is not well defined. I try to determine if ovarian function is normal or low and if evidence of associated androgen excess or galactorrhea exists. (see Table II)

**Dr. Meeks:** Menarche occurred at age 12 and thelarche at age 10. Menstrual cycles were predictable at 28 day intervals until she was 19 years old. She then began using cocaine, morphine, barbiturates, and marihuana, and her cycles became irregular. She had had amenorrhea since age 22 and also had noted breast secretion. After mul-



Table II: CAUSES OF SECONDARY AMENORRHEA

<b>Normal Ovarian Function</b>
Asherman's Syndrome
Endometrial Destruction (tuberculosis, irradiation)
<b>Decreased Ovarian Function</b>
Aberration of Hypothalamic Axis
Psychogenic
Nutritional (Anorexia Nervosa)
Exercised-induced
Pseudocyesis
Pharmacologic (psychotropic, drug abuse)
Feminizing Tumors
<b>Increased Androgen</b>
Polycystic Ovary Syndrome
Masculinizing Ovarian Tumors
Adrenal Hyperplasia
<b>Increased Prolactin</b>
Pituitary Adenoma
Hypothyroidism

tiple hospitalizations for substance abuse, she withdrew from drugs. Her current medications are diazepam (Valium), chlorpromazine (Thorazine), and fluphenazine (Prolixin). She had no other significant gynecologic history. She was not sexually active and was not taking oral contraceptive pills (OCP).

Dr. Stubblefield: This patient has secondary amenorrhea associated with galactorrhea. This is often associated with elevated serum prolactin concentration (PRL).

Dr. Poole: Elevated PRL may be associated with an underlying pituitary tumor, medications (especially the psychotropic drugs) and hypothyroidism.

Dr. Meeks: D.D. was well developed and appeared older than her stated age. Blood pressure was 110/70 mmHg, pulse was 72 bpm, height was 64", and weight 127 pounds. The breast were normally developed and secretion was easily expressed from each. Pelvic examination revealed normal external genitalia, and normal pubic hair. The vaginal mucosa was minimally rugated. A scant amount of clear cervix mucous was present. The uterus was normal size, freely mobile and non-tender. No adnexal masses were present. What is the next step in her evaluation?

Dr. Bush: One must also determine whether or not

estrogen and progesterone are being secreted by the ovary.

Dr. Stubblefield: Galactorrhea can be confirmed microscopically if fat globules are present in the breast secretion.

Dr. Poole: Clinically, estrogen would appear to be deficient because the vaginal mucosa is somewhat atrophic and mucous is scant. One must determine whether the ovaries are normal or not. Also, one must determine the cause of galactorrhea.

Dr. Meeks: How can this be accomplished?

Dr. Bush: Determination of PRL is simple and relatively inexpensive. Because normal serum estrogen concentrations may vary widely, ovarian function can be evaluated by determination of serum follicle stimulating hormone concentration (FSH) and luteinizing hormone concentration (LH). If the FSH and LH are normal, most often the ovaries are normal. The pituitary may however fail to secrete FSH and LH. If FSH and LH are elevated, one must consider ovarian failure.

Dr. Meeks: FSH was 4.2 mIU/ml (nl=6-30), LH was 2.8 mIU/ml (nl=2-30), and PRL was 75 ng/ml (nl up to 28). How does one interpret these data? Should any additional evaluation be performed?

Dr. Stubblefield: Elevation of PRL explains galactorrhea. Low FSH and LH implies that ovarian function is normal.

Dr. Poole: The low FSH and LH value may be related to the elevated prolactin which will inhibit normal pituitary activity. Also if a pituitary adenoma is large, pituitary function may be impaired and thus associated with low FSH and LH.

Dr. Bush: Pituitary adenoma can be excluded with computerized axial tomography (CT Scan) or Magnetic Resonance Imaging (MRI). The possibility of a pituitary adenoma is remote if PRL is less than 80 ng/ml. Thyroid function can be evaluated with thyroid stimulating hormone concentration (TSH) and serum thyroxine concentration ( $T_4$ ). The effect of psychotropic drugs may be determined by discontinuing them for a short period of time.

Dr. Meeks: A CT scan revealed no microadenoma, TSH was 7 mIU/ml (nl=4-12), and  $T_4$  was 10 ug/dl (nl=5-14). What is the most likely diagnosis?

Dr. Stubblefield: Therapy with chlorpromazine and



fluphenazine is the most likely cause for hyperprolactinemia. The low FSH and LH are secondary to the elevated PRL.

**Dr. Meeks:** After six months of therapy for substance abuse, she discontinued chlorpromazine and fluphenazine. Six months later, minimal breast discharge remained. Pelvic exam, again, revealed a scant quantity of clear cervical mucous. The following laboratory results were obtained: FSH 6 mIU/ml, LH 8 mIU/ml, PRL 12 ng/ml. She had not yet had a menstrual cycle. What should be done now?

**Dr. Poole:** Marihuana (tetrahydrocannabinol [THC]) use, as infrequently as once per week, has been associated with reduced FSH and LH secretion. This results in low estrogen concentration with subsequent amenorrhea and loss of libido. In men testosterone concentration is lowered and results in loss of libido and impotence in extreme cases. Could she still be smoking marihuana?

**Dr. Meeks:** Further questioning revealed that she continued to use marihuana at least twice weekly.

**Dr. Stubblefield:** Certainly she should stop smoking marihuana.

**Dr. Bush:** I am uncertain if marihuana is the cause of her failure to menstruate. She may not have yet had enough time to recover completely from the PRL elevation.

**Dr. Meeks:** She discontinued marihuana. Six weeks later (12 weeks after discontinuing chlorpromazine), she had a normal menstrual cycle. She subsequently resumed normal, predictable menstrual cycles.

Let us assume a different scenario. The PRL is normal while FSH and LH are increased in a woman who presents with no periods, and who does not use drugs.

**Dr. Stubblefield:** Elevation of gonadotropins indicates ovarian failure. In a woman less than 35 years old this constitutes premature ovarian failure by definition and occurs in approximately 1% of women. Ovarian failure may occur in conjunction with multiple glandular endocrinologies. This is oftentimes associated with circulating antibodies and may be considered an autoimmune phenomena.

**Dr. Bush:** Premature ovarian failure, especially in

women less than 25 years old, is associated sometimes with abnormal sex chromosome karyotype. Partial long-arm deletion of the X chromosome is common as well as mosaic patterns associated with XO chromosome cell lines.

**Dr. Meeks:** Now, let us assume that PRL is normal while FSH and LH are normal to low in a woman with amenorrhea.

**Dr. Poole:** Low gonadotropin values indicate hypothalamic pituitary dysfunction. A common reason for hypothalamic pituitary dysfunction is altered body weight. A critical height to weight ratio is necessary for initiation and maintenance of menstrual cycles. Acute weight loss such as that seen in women dieting or exercising vigorously alters hypothalamic pituitary function and thus may lead to irregular cycles and amenorrhea. The exact mechanism by which the acute weight loss causes this has not been fully elucidated.

**Dr. Bush:** Menstrual disturbance is common when a woman is less than 95% of ideal body weight (IBW), and amenorrhea is likely at less than 90% of IBW. The classic example is anorexia nervosa. Patients' perception of body image is altered and inappropriate. Even though they may be emaciated, their perception is that of being overweight. They, therefore, attempt to lose additional weight by eating less, by inducing vomiting, and by purging themselves with cathartics.

**Dr. Poole:** The underlying cause of menstrual dysfunction associated with extreme degrees of weight loss is a loss of pulsatile LH secretion.

**Dr. Stubblefield:** Menstrual disturbance is common in women who exceed 120% of IBW and amenorrhea is common in women who exceed 150% of IBW.

**Dr. Meeks:** What if the obese woman with amenorrhea also has symptoms including hirsutism, oily skin, and acne?

**Dr. Bush:** One must consider androgen excess. The ovaries and adrenal glands are the only two sources of androgens.

**Dr. Stubblefield:** Obese women who complain of menstrual irregularity, hirsutism and infertility, are often classified as having polycystic ovaries or polycystic ovarian disease. Commonly the LH to FSH ratio is in excess of 3. The elevated LH levels cause the ovaries to secrete excess androgen.

**Dr. Poole:** If serum androstenedione and testosterone concentrations are elevated, polycystic ovarian



syndrome is confirmed. If not, one must consider an adrenal source of androgen. Dehydroepiandrosterone sulfate concentration (DHEA) is an androgen which is primarily of adrenal origin. Several enzymatic deficiencies which are associated with inadequate cortisol production may lead to androgen excess. Traditionally, these are categorized together as congenital adrenal hyperplasia. This diagnosis may be confirmed in 17-hydroxyprogesterone concentration (17-OHP) is elevated.

**Dr. Stubblefield:** One should try to suppress androgens. Oral contraceptive pills are effective in reducing ovarian androgen production. If androgen excess is associated with obesity, weight loss may achieve the same result. Prednisone or dexamethasone will suppress adrenal gland function and thus adrenal androgen production. If medical management is not successful one must be concerned about a neoplastic process. In addition, if the testosterone value is greater than 2 mg per ml, one must be concerned about tumor.

**Dr. Meeks:** Is amenorrhea common following chemotherapy?

**Dr. Bush:** Chemotherapeutic agents may alter ovarian function. Indeed, cyclophosphamide (Cytoxan) has a unique tendency to damage the ovarian follicle and thus limit ovarian steroid hormone production. Recently, it has been recommended that women be placed on oral contraceptive pills during chemotherapy to protect the ovaries by suppressing follicular development.

**Dr. Meeks:** What if a patient has normal hormone concentrations and cyclic symptoms yet fails to menstruate?

**Dr. Poole:** One must consider an outflow tract abnormality. Most commonly in the United States this is associated with Asherman's Syndrome. In underdeveloped countries, tuberculosis and schistosomiasis may be the etiology.

**Dr. Meeks:** How should one evaluate a patient who has never menstruated?

**Dr. Stubblefield:** If secondary sexual characteristics have not developed, the gonads have never produced sex steroid hormones. The most common etiology is Turner's Syndrome, which is gonadal dysgenesis associated with XO karyotype.

**Dr. Bush:** Patients may have XX and XY dysgenesis also. Obtaining a chromosome karyotype may be diagnostic.

**Dr. Meeks:** What is the patient has secondary sexual characteristics but no menstrual cycles?

**Dr. Poole:** One must suspect Mullerian Duct anomalies and genital tract obstruction.

**Dr. Bush:** One should consider congenital absence of the vagina (Rokitansky-Kuster-Hauser Syndrome.) If the vagina is present, one must evaluate whether or not a uterus is present.

**Dr. Stubblefield:** Secondary sexual hair is a manifestation of androgen production and effect. If breasts are developed but secondary sexual hair and the uterus have not, one must consider androgen insensitivity syndrome. This is the classic male pseudo-hermaphroditism. Phenotype is female but genotype is male.

**Dr. Meeks:** If a Y chromosome is present, how should this patient be managed?

**Dr. Bush:** A Y chromosome is associated with an approximately 25% risk of malignant transformation in the gonad. Therefore, they should be removed. Most physicians, however, recommend that the patient be allowed to go through puberty before gonadectomy, especially in androgen insensitivity syndromes. The patients are then supplemented with exogenous hormones.

**Dr. Meeks:** What is the goal of therapy for primary amenorrhea?

**Dr. Poole:** If secondary sexual characteristics have not developed, then one should provide therapy which will establish a normal mature female phenotype. If the gonads and uterus are present, one should also restore fertility if possible. Certainly in those women who have an abnormal vagina, restoration of the vagina to allow normal sexual function is critical.

**Dr. Stubblefield:** In patients who are sexually infantile, estrogen followed by a combination of estrogen and progesterone is appropriate. Oftentimes these patients are infertile because the ovaries do not function. If, however, the underlying cause is a pituitary abnormality such as Kallman's Syndrome, treatment with gonadotrophins may allow normal physical development and fertility.



**Dr. Meeks:** What is the goal of therapy in secondary amenorrhea?

**Dr. Bush:** Restoration of menses and re-establishment of fertility are the most critical goals. Secondary goals are to prevent metabolic consequences of menopause such as genital atrophy, osteoporosis, and cardiovascular disease.

**Dr. Meeks:** Amenorrhea is a symptom which is associated with great patient anxiety or parental anxiety in the case of women approaching puberty. It is a symptom that should be addressed promptly. The separation of amenorrhea into a primary and secondary category is somewhat arbitrary but allows this condition to be approached in an orderly manner.

I would like to thank our panelists for taking time out from their busy practices to participate in grand rounds.

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# Address of the President

J. Elmer Nix, MD

Good morning distinguished guests, delegates, staff, spouses, friends and family. This is my moment in the spotlight or my day in the sun, and I thank all of you for giving me this opportunity to serve as the President of the Mississippi State Medical Association.

Thirty-eight years ago when I was a freshman medical student, an elderly lady, the mother-in-law of the MSMA President, commented to me that perhaps someday I would be the President of the Mississippi State Medical Association. How ridiculous I thought. I simply wanted to become a doctor - to become a doctor, that was my highest aspiration, the major goal of my life at the time. I never dreamed of this happening but it did come about and I speak to you this morning with a great sense of humility, appreciation and pride. Thank you for the great honor you bestowed on me.

Traditionally, in a Presidential Address, one makes some reference to his own special interests. This morning I wish to address some of my special interests, which I believe are also *your* special interests. One of my special interests is the Mississippi State Medical Association. Our state medical association is one hundred and thirty-five years old and its guiding mission continues to be: (1) to advance the art and science of medicine, and (2) to protect the public health.

Since its founding in 1856, the Mississippi State Medical Association has grown from an organization with twenty members to one with approximately three thousand members, and with this growth we have expanded our efforts to both serve and represent Mississippi physicians and their patients.

During the past year your association has dealt with many problems, some pleasant and some not so pleasant, but overall it has been an enjoyable year for

me. It has been particularly pleasant to work with the state medical association staff. We have won some battles but we lost some battles - *c'est la vie* or *c'est la guerre*.

We did sponsor a successful Legislative Day on January 23 and we were able to get legislation passed to require third party payors to notify the physician when payments are made directly to patients. We were also able to defeat a medical fee schedule begin proposed for patients covered under Workers' Compensation insurance. Unfortunately we were unable to get other anti-hassle legislation passed. We must double our efforts this year.

I want to congratulate our legislature for establishing a state insurance pool that will allow many uninsured Mississippians to purchase health care insurance. I also wish to salute the legislature for its difficult decision to close charity hospitals. Many were opposed to the closing of these hospitals. However, I am happy to report that those patients who formerly went to the state charity hospitals, have been absorbed and cared for by local physicians in private practice, in cooperation with the Mississippi State Department of Health. Local physicians have volunteered to assist the Health Department, and those indigent patients are not going without care. I commend those physicians who have cared for these indigent patients in Vicksburg, Meridian, Laurel and Natchez. Mississippi doctors still care about patients.

As I speak of our legislature, I must mention the elections that are coming up this Fall. As soon as the redistricting issue is settled, the candidates will begin campaigning. It is extremely important that we get involved in these elections. Many new faces will be in our next legislature and we want those faces to be friendly to medicine.



If we are to have any influence on our destiny, if we are to have any chance at thwarting the continuing efforts of some allied health groups to expand their scope of practice, if we are to obtain some element of parity and equity in our dealings with third-party payors, and in dealing with the civil justice system, and if we are to favorably influence other legislative issues, the *me* *must* become deeply involved in the upcoming legislative races.

One way to influence those races is through financial support of the Mississippi Medical Political Action Committee. Currently only 30% of our association members contribute to our political action committee. Perhaps more significantly, only *half* of the members of this House of Delegates *belong* to our political action committee. This House of Delegates represents the leadership of organized medicine in Mississippi and should, therefore, be in the forefront of political participation and involvement. Or, are we still sitting on our hands and saying we don't want to soil our hands by getting into the dirty business of politics. Could it possibly be that we are too parsimonious to part with any of our money? I find it difficult to believe that physicians are not willing to make financial contributions to help preserve our noble profession. I find that difficult to believe, but I have been able to overcome that difficulty and I do believe it. Seventy percent of our membership is letting the other thirty percent carry the financial burden of political involvement when this political involvement benefits one hundred percent of our members.

Political physics tells us that money gets candidates elected, and those candidates remember will those who contributed to their campaigns. We are not trying to buy any candidate, we are simply trying to get the best ones elected and then have an opportunity to be heard. We firmly believe we can sell our position to an open-minded and fair legislator. The influence medicine has on the upcoming legislative races the Summer will have a significant impact on health legislation to be considered by the Mississippi legislature over the next four years. I ask those of you who are not members of our political action committee, to join with us in helping secure the future of medicine, by supporting our association's efforts to achieve appropriate political influence.

Your association and this House, both have urged a "fair share" of Medicaid recipients. Our Council on Medical Service is furnishing you information at this meeting on the percentage of Medicaid recipients in your county. I urge you to see your "fair share" of our medically indigent. The Omnibus Budget Recon-

ciliation Act of 1990 requires that we provide Medicaid coverage for children under 18 years of age when their family incomes are less than 100% of the federal poverty level. This will extend Medicaid coverage to some 63,000 more children in Mississippi as of July 1, 1991. Many of your poor patients in Mississippi are still not getting what we consider to be basic and necessary health care. We do an injustice to our many colleagues, who see Medicaid patients and also to our profession, when we refuse to accept Medicaid patients. Unless we act in a more responsible manner toward those Medicaid patients, we will soon be facing mandatory assignment.

During the past year we have continued to support the School Health Education Curriculum project which took off this year with the Teen Health Program at the University of Southern Mississippi. This is such a natural project for physicians and spouses to become involved in to improve their community, our state and the image of our profession. Of the seven principles of medical ethics we most commonly fall short in #7 which states "A physician shall recognize a responsibility to participate in activities contributing to an improved community." This particular project is one that deserves our enthusiastic support.

If our component societies are really the "grass roots" of organized medicine, as they should be, then we must be concerned that a recent survey indicates only some 40% of the membership attends their component society meetings. This year, our state medical association will offer a medical socio-economic issues program to component societies. We urge the involvement of the Auxiliary in the component society meetings. The Auxiliary is our strong right arm and we must take advantage of that strength, particularly in community and legislative arenas.

On a more mundane note, I believe we should provide the MSMA president an annual stipend of \$6,000 starting with your incoming president. The president of your state medical association has increasing demands to speak, and to be at places where important decisions are being made about the future of medicine. The office of President of the Mississippi State Medical Association now consumes about 30 days out of the office on MSMA business. I assure you the position is costing the president much more the \$6,000 in lost income.

The practice of medicine has changed tremendously in recent years. Today, the federal government, third party payors and physician groups are examining many health care issues, especially the cost of health care, access to care and quality of care. I believe our pa-



tients today enjoy the best health care in the world. In our efforts toward cost containment, we must never sacrifice the principles of quality care. Just this past Sunday, the Clarion Ledger had several articles on health care costs and physicians incomes. I offer no apology, nor do I feel it necessary to defend physician incomes. When we consider the cost of medical care today as opposed to the amount of money that is spent on alcohol, tobacco, illegal drugs, etc., we may conclude something akin to what Mark Twain said after listening to Wagner's music, "It is not as bad as it sounds" I ask you, "Is there anything inherently wrong with the American people spending 15% of the gross national product on health care?"

It is important for us to be concerned about the economics of health care in medical practice. We should continue our efforts toward cost containment but we must never sacrifice quality for lower cost. We must make certain that price competition does not lead to health care rationing or to a lessening of quality. Let us never adopt or accede to the "Caveat emptor" principle. As we work to achieve cost containment, we must also work to improve access to care. I believe we have the quality but we must continue to strive to improve on the best.

What should be our goals for the future? We are already pursuing many worthwhile projects to advance that art and science of medicine and to protect the public health. I believe we have a responsibility to our membership and I urge that we:

1. Continue to study ways to deal with third party "hassle factors". This is a major factor in early retirement of doctors who are in their prime.
2. We must find ways to get younger physicians truly involved in the Mississippi State Medical Association. Perhaps it is time for some of us older doctors to step aside and make way for the young Turks - tomorrow's medical leaders.
3. We should aid and assist the Mississippi State Department of Health in its study of trauma care in Mississippi.
4. We should make a concerted effort to attract physicians to rural areas of Mississippi, and
5. We must continue to try to solve the problems of access to health care for the poor people of Mississippi.

For the past twelve months, I have bombarded you with articles about ethics, morals, education and discipline of physicians. I believe the vast majority of Mississippi doctors are highly ethical, competent physicians who are caring and curing on a daily basis. However, there are a few physicians out there who

do not meet the appropriate standards of ethics and/or competence. I know I have been preaching only to the choir. However, It is my hope that you, the choir, will discuss the issues I have raised and perhaps stimulate some improvement in those who have strayed from the fold. Perhaps you will instigate some disciplinary action where it is indicated. As physicians, we do have an obligation to "strive to expose those physicians deficient in character or competence, or who engage in fraud or deception." Let us not forget that responsibility; it is one of the cornerstones of our noble profession. We must continue to emphasize that by our membership in the state medical association, we do abide by and support "the principles of medical ethics," all of which are directed toward the interest of our patients and our communities. Our recent membership survey indicates that one of our top three priorities is "upholding medical ethics."

The idea of ethics and the human responsibility of the doctor has been present since medicine was indistinguishable from magic. This aspect of medicine, call it humanism if you will, is infused with Judeo-Christian ethic. *Medicine should be practiced as a form of friendship.* In dealing with patients we must never forget there is an intensely personal relationship between the patient and his doctor. A good doctor must possess knowledge, but he must also possess skill and compassion. We can cure patients sometimes, we can give the relief often, but hope, we can give them always. Let us not lose or abandon the art of medicine.

This has been an exciting and enjoyable year as president of the state medical association. Rosemary and I have enjoyed this year and we both thank you for this special honor. It is important to me to indicate to you the value of the support I have had from the staff of the state medical association and also the support of a loving, patient and supportive wife and best friend, Rosemary.

I wish to conclude on a bright and optimistic note by quoting from the poem "Happy Thought" by Robert Lewis Stephenson, "The world is so full of a number of things, I'm sure we should all be as happy as kings."

God bless all of you.



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## The President's Page

JAMES C. WAITES, MD

### Potential

Let me first thank each of you for the honor bestowed on me at the annual meeting, not only becoming your president, but receiving the community service award. My cup truly runneth over. My promise to you is to work hard, be available and commit my time to doing the best job I possibly can. I look forward to visiting with the component societies this year, and would certainly welcome visits to your medical staff meetings if you think that would be appropriate. While not professing to be the smartest person in the world, one thing that I know is that I do not learn very much while I am the one talking, but I learn a lot by listening. I intend to do a lot of listening this year, to hear you, your successes, your concerns and your frustrations, and hopefully to assist in trying to solve or modify our mutual problems.

By now each of you has seen the remarks that I delivered at the annual meeting. I would like to use this column to amplify some of those thoughts. In those remarks I challenged you to look at your potential, to realize that we are all more alike than different, to realize that while we each attempt to satisfy our own needs, the needs of the group can best be accomplished by the collective voice of us all. In speaking of potential, I heard an illustration on one occasion that made an impression on me and that I would like to share with you.

A baseball while sitting on a table has no energy on its own, but if that ball is picked up thrown into the air, it then develops kinetic energy, energy that is being released. It becomes bouncy, vibrant. While that ball had no energy sitting on the table, when someone or some thing moved or released it, then its potential became active, alive, available to impact on its surroundings.

I am afraid that we are frequently like the ball, we sit there being a ball until someone or something comes along and stirs us up or hits us with a stick then we become mobilized and begin to release our energy and react to the stimulus.

We need to become active on our own, not just reactive. We need medicine's collective voice to speak out on issues, because it is right, not just

*(Continued on page 223)*



## Presidential Address

At the recent annual session of the MSMA, C. John Tupper, M.D., president of the AMA, addressed the house of delegates. His excellent presentation featured several salient points which deserve to be repeated.

First, the most serious problem facing our health care system is access to care. Approximately 37 million Americans are either uninsured (because they cannot afford to pay or choose not to pay health insurance premiums) or uninsurable (because of pre-existing illness). This is not a desirable situation, and the AMA has proposed a positive solution to this problem, called Health Access America. While this plan may not be a perfect solution to the access problem, it contains many strengths and deserves serious consideration by the American people and their representatives.

Second, the cost of health care was discussed. In particular, the growing percentage of gross national product (GNP) which is spent (of better, provided) in the health care sector was addressed. This phenomenon, contrary to popular belief, is not caused by greed in the health care sector (although greed exists in all segments of the economy). Rather, the increase in health care production (and consumption) is a direct result of the following: 1) the increase in the percentage of the population which is elderly, and 2) increasing productivity in the health care sector, including technological advances which were not available 20 or 30 years ago. Whether or not the public wishes to provide this care to everyone at any cost is another matter, and involves consideration of rationing of care. However, an arbitrary ceiling on health care expenditures as a percent of GNP seems unwise and irrational when one considers that the underlying problem might best be solved by increasing the productivity of other segments of the economy rather than decreasing the productivity of the health care

sector. For example, our system medical education is still regarded as the finest in the world, although our automobiles are not.

Third, President Tupper advised, don't throw the baby out with the bath water. Our health care system certainly has its problems, but none which cannot be fixed. It is better to repair the generally excellent system which we have than to start from scratch with an untried, totally new national health insurance system.

Dr. Tupper's words appear to be on target, and hopefully his efforts and those of the AMA will be fruitful in the years ahead, for the benefit of patients and providers alike.

George E. Abraham, II, MD  
Associate Editor

## Presidents's Page

*(Continued from page 222)*

because we are against the position of the other party. We need stirring up before we are hit with the stick and are forced to fight back.

So my challenge to you is to realize your own potential. Stir yourself up, and while doing so stir someone else up. We seem to be always at a crossroad of one type or the other, and this year is no different. Medicine is changing. We need your thoughts, your input, your power. We need you to be the one tossing your fellow physicians in the air to help them realize their potential.

Let us hear from you both good and bad. The worst thing that any of us can do is to sit on the table and wait to be hit with the bat.



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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **Principles of Medical Ethics**

The earliest written code of ethical principles for medical practice was conceived by the Babylonians around 2000 B.C. That document, the Code of Hammurabi, was indeed a code of conduct setting forth in considerable detail for that era the nature of conduct demanded of the physician. Today that code would be subject to criticism because of the physician. Today that code would be subject to criticism because it went into too much detail. It is doubtful that it could have continued as a practical document through the centuries because, as medical science and cultural patterns became more complex, it would have required one skilled in jurisprudence to codify and interpret the myriad situations covered by it.

The Oath of Hippocrates, a brief statement of principles, has come down through history as a living statement of ideals to be cherished by the physician. This Oath was conceived some time during the period of Grecian greatness, probably in the fifth century B.C. It protected rights of the patient and appealed to the inner and finer instincts of the physician without imposing sanctions or penalties on him. Other civilizations subsequently developed written principles, but the Oath of Hippocrates (Christianized in the tenth or eleventh century A.D. to eliminate reference to pagan gods) has remained in Western Civilization as a expression of ideal conduct for the physician.

The most significant contribution to medical ethical history subsequent to Hippocrates was made by Thomas Percival, an English physician, philosopher, and writer. In 1803, he published his Code of Medical Ethics. His personality, his interest in sociological matters, and his close association with the Manchester Infirmary led to the preparation of a “scheme of professional conduct relative to hospitals and other charities” from which he drafted the code which bears his name.

At the first official meeting of the American Medical Association at Philadelphia in 1847, the two principal items of business were the establishment of a code of ethics and the creation of minimum requirements for medical education and training. Although the Medical

Society of the State of New York and the Medico-Chirurgical Society of Baltimore had formal written codes of medical ethics prior to this time, it is clear the AMA's first adopted Code of Ethics was based on Percival's Code.

In general, the language and concepts of the original Code adopted by the Association in 1847 remained the same throughout the years. There were revisions, of course, which reflected the temper of the times and the eternal quest to express basic concepts with clarity. Major revisions did occur in 1903, 1912, and 1947.

In December 1955, an attempt was made to distinguish medical ethics from matters of etiquette. A draft of a two-part code seeking to accomplish this was submitted to the House of Delegates at that time but was not accepted. This proposal was, in effect, a separation of then existing statements found in the Principles into two categories. Little or no change was made in the language of the forty-eight sections of the Principles. Subsequently, in June 1956, a seemingly radical proposal was submitted to the House of Delegates for consideration. This proposal, a short version of the Principles, was discussed at the December 1956 session of the House after wide publication and broad considerations among members of the medical profession. It was postponed for final consideration until the June 1957 meeting of the House of Delegates, when the short version was adopted.

The format of the Principles adopted in June 1957 is a change from the format of the Principles promulgated by Percival in 1803 and accepted by the Association in 1847. Ten short sections, preceded by a preamble, “succinctly express the fundamental concepts embodied in the present (1955) Principles,” according to the report of the Council on Constitution and Bylaws. That Council assured the House of Delegates in its June 1957 report that “every basic principle has been preserved; on the other hand, as much as possible of the prolixity and ambiguity which in the past obstructed ready explanation, practical codification and particular selection of basic concepts has been eliminated.”



In 1977, the Judicial Council recommended to the House of Delegates that the AMA Principles of Medical Ethics be revised to clarify and update the language, to eliminate reference to gender, and to seek a proper and reasonable balance between professional standards and contemporary legal standards in our changing society. Given the desire of the Judicial Council for a new version of the Principles to be widely accepted and accurately understood, in 1978 the Judicial Council recommended that a special committee of the House of Delegates adopted the revision of the AMA Principles of Medical Ethics.

In June 1985, the Judicial Council became the Council on Ethical and Judicial Affairs.

## **PREAMBLE:**

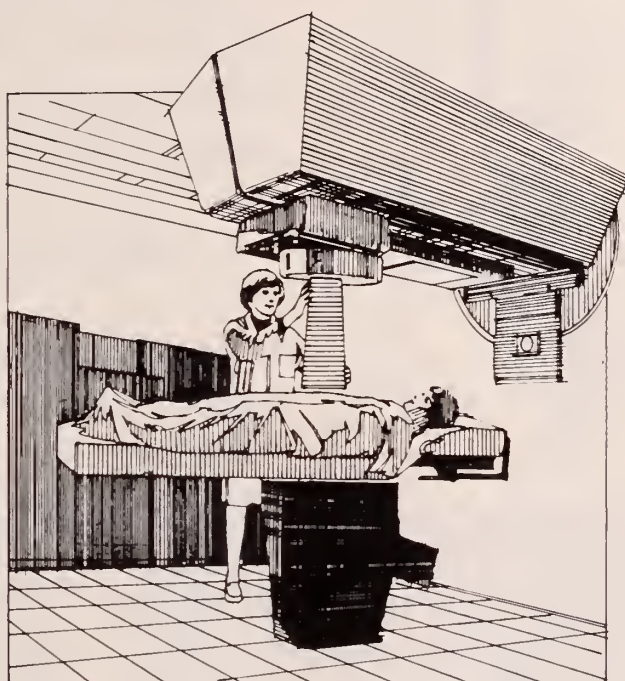
The medical profession has long subscribed to a body of ethical statements developed primarily for the benefit of the patient. As a member of this profession, a physician must recognize responsibility not only to patients, but also to society, to other health professionals, and to self. The following Principles adopted by the American Medical Association are not laws, but standards of conduct which define the essentials of honorable behavior for the physician.

- I. A physician shall be dedicated to providing competent medical service with compassion and respect for human dignity.
- II. A physician shall deal honestly with patients and colleagues, and strive to expose those physicians deficient in character or competence, or who engage in fraud or deception.
- III. A physician shall respect the law and also recognize a responsibility to seek changes in those requirements which are contrary to the best interests of the patient.
- IV. A physician shall respect the rights of patients, of colleagues, and of other health professionals, and shall safeguard patient confidences within the constraints of the law.
- V. A physician shall continue to study, apply and advance scientific knowledge, make relevant information available to patients, colleagues, and the public, obtain consultations, and use the talents of other health professionals when indicated.
- VI. A physician shall, in the provision of appropriate patient care, except in emergencies, be free to choose whom to serve, with whom to associate, and the environment in which to provide medical services.
- VII. A physician shall recognize a responsibility to participate in activities contributing to an improved community.



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# Medical Organization

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## Dr. Waites Installed as MSMA President; Dr. Gates Named President-Elect

Dr. James C. Waites of Laurel was inaugurated 1991-1992 president of the MSMA at the closing meeting of the 123rd Annual Session held in Biloxi, May 15-19, 1991. He succeeds Dr. J. Elmer Nix of Jackson. Dr. William C. Gates of Columbus was named president-elect.

The new MSMA president has served as president-elect and Speaker of the House. He currently serves as MSMA delegate to the American Medical Association. He is a member of the Mississippi Academy of Family Physicians and has served that organization as secretary, treasurer, vice president and president. In 1987, Dr. Waites was named Family Doctor of the Year by the Mississippi Academy of Family Physicians of which he is also a Charter Fellow.

Dr. Waites received the 1991 MSMA Community Service award presented during the opening session

of the House of Delegates.

Dr. Gates, the new president-elect, has served MSMA as a delegate to the American Medical Association. He is a fellow of the American College of Surgeons and a diplomate of the American Board of Urology. Dr. Gates is a past president of Lowndes County Medical Society, Prairie Medical Society and the Mississippi Urology Society.

Approximately 500 physicians, spouses, and guest registered for the five-day session, which featured a full program of scientific, business, and fellowship activities.

Among special guest addressing the House of Delegates was Dr. John C. Tupper, president of the American Medical Association. Mrs. Norma Skogland, AMA Auxiliary president was also present and addressed the Auxiliary House of Delegates.

In addition to electing new officers, the House of Delegates took action on reports and resolutions concerning health care in Mississippi. A summary of House actions appears on page 235 of this issue.



*Following his installation as 1991-92 President of MSMA, Dr. James C. Waites, left, was pictured with Dr. William C. Gates, president-elect and Immediate Past President Dr. Elmer J. Nix, right.*



## MSMA House of Delegates Opening Session

MSMA President J. Elmer Nix, MD, upper right, addressed the opening session of the House giving a report of his year as president and making recommendations of issues to be considered by the House in the future. Dr. Nix's complete remarks are printed on page 217 of this issue of the *Journal MSMA*.

MSMA Auxiliary President Merrell Rogers of Tupelo, right, presented her annual report of auxiliary activities to the House of Delegates. She particularly cited the auxiliaries AMA-ERF contribution in the amount of \$42,726.37 to the University of Mississippi Medical Center.

Both Dr. Nix and Mrs. Rogers reported on the association's activities concerning student health education.

There were 257 members registered for this annual session. Some of the delegates participating in the opening session of the MSMA House of Delegates are seen in the photograph below.





## Award Presentations 123rd Annual Session



*Dr. Stanley Hartness, left, chairman of the Council on Public Information presented the 1991 Media Award of Excellence in Broadcast, radio category, to Kevin Farrell of Public Radio Mississippi for his news report on "Health Care Funding Cuts". The 1991 Media Award of Excellence in Broadcast, television category, was presented to Ms. Patty Callish, WTOK-TV Meridian for her series on "Cocaine Babies".*

*Below, Dr. George Ball, left, presented a special award of commendation to Dr. Max L. Pharr, right, of Jackson for his outstanding service to the Medical Assurance Company of Mississippi.*



*Dr. J. Elmer Nix presented the MSMA 1991 Community Service Award to Dr. James C. Waites of Laurel*



*Dr. George Ball, left, secretary and treasurer of the Medical Assurance Company of Mississippi (MACM) presented the Robert S. Caldwell Memorial Award to Dr. Ronald Glen Herrington, MD of Jackson.*





*Dr. Billy W. Long of Jackson presented the report of Reference Committee B to the House of Delegates. Speaker of the House Dr. Vann Craig of Natchez presided over the session.*



*Delegates pictured above and below marked their ballots and heard reference committee reports during the closing session of the House of Delegates.*



## Newly Elected Officers, Board and Council Members

Delegates to the 123rd Annual Session named **Dr. William C. (Bill) Gates of Columbus** as MSMA's 1991-92 president-elect.

Board of Trustees - District 1

**Michael G. Carter, MD, Greenwood**

Board of Trustees - District 3

**Leonard H. Brandon, MD, Starkville**

Associate Editor- *Journal MSMA*

**Joe Johnston, MD, Mt. Olive**

Delegate to AMA

**J. Edward Hill, MD, Hollandale**

**Carl G. Evers, MD, Jackson**

**James C. Waites, MD, Laurel**

Alternate Delegates to AMA

**Candace E. Keller, MD, Hattiesburg**

**W. Lamar Weems, MD, Jackson**

**George E. McGee, MD, Hattiesburg**

Council on Constitution & Bylaws

**Eugene G. Wood, Jr., MD, Jackson**

Judicial Council

District 6 - **Word M. Johnston, MD, Mt. Olive**

District 7 - **Eugene E. Taylor, MD, Natchez**

District 8 - **Bill M. Wansley, MD, Biloxi**

Council on Legislation

District 4 - **Billy W. Long, MD, Jackson**

District 5 - **Dewitt G. Crawford, MD, Louisville**



**Council on Medical Education**

District 6 - **Chris H. Benson, MD**, Hattiesburg

District 7 - **Charles A. Marascalco, MD**,  
Vicksburg

District 8 - **Donald K. Gaddy, MD**, Gulfport

**Council on Medical Service**

District 6 - **Nancy O. Tatum, MD**, Petal

District 7 - **Elmo P. Gabbert, MD**, Meadville

District 8 - **Edward J. Shumski, MD**, Biloxi

**Council on Public Information**

District 1 - **Alfio Rausa, MD**, Greenwood

District 7 - **George E. Abraham, MD**, Vicksburg

District 8 - **Hal Moore, Jr., MD**, Pascagoula

**Council on Budget & Finance**

**David L. Clippinger, MD**, Gulfport

**Francis Morrison, MD**, Jackson

**Thad Waites, MD**, Hattiesburg

**Chairman-Medicine Planning Group**

**David N. Duddleston, MD**, Jackson

**Chairman-Hospital Medical Staff Section**

**G. Howard Freeman, Jr., MD**, Jackson

The following physicians were elected by the House of Delegates for nomination to the Governor for appointment to the Board of Medical Licensure:

**Edwin G. Egger, MD**, Greenville

**Mathew J. Page, MD**, Greenville

**Bennie B. Wright, MD**, Cleveland

**William J. Gillespie, Jr., MD**, Jackson

**T. Steve Parvin, MD**, Starkville

**J. W. Williamson, MD**, Tupelo

**Sidney O. Graves, Jr., MD**, Natchez

**Richard F. Riley, MD**, Meridian

**Robert E. Tyson, MD**, Jackson



*Dr. Lamar Weems of Jackson addressed the House of Delegates concerning the upcoming Mississippi legislative races.*



*Above, delegates study reference committee reports as they were presented during the closing session of the MSMA House.*

*Below, Dr. Milam S. Cotten of Hattiesburg, at the microphone, addressed the House concerning a particular reference committee report. Dr. George Abraham of Vicksburg waits to make a comment.*





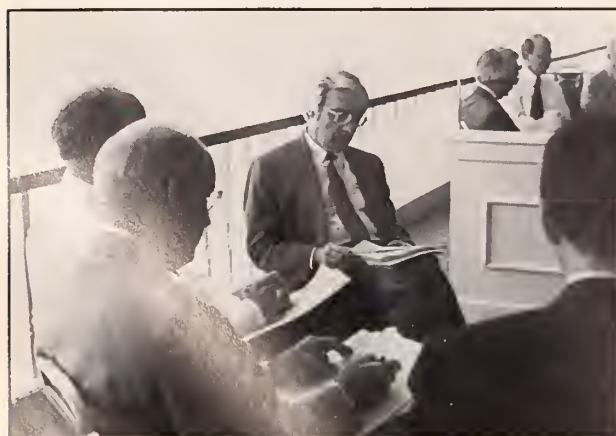
## Reference Committees



*Members of Reference Committee A were, from left to right, Dr. John F. Lucas, III; Dr. George Ball, Dr. Hal Moore, Dr. Thomas C. Fenter, chairman and Dr. Leslie E. England.*



*Dr. George McGee of Hattiesburg, at microphone, asked questions about a resolution under consideration by Reference Committee A. Below, at the conclusion of the meeting members of committee discussed each resolution.*



*Members of Reference Committee B, from left, Dr. George E. Abraham, Dr. Billy Long, Dr. Barney J. Guyton, chairman and, not shown, Dr. John R. Shell and Dr. Edward J. Schumski.*



*Members, above and below, studied reports and participated in the discussion during the Reference Committee B meeting held on Friday afternoon during the 123rd annual session.*





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# ACTIONS OF THE MSMA HOUSE OF DELEGATES

## 123rd Annual Session May 15-19, 1991

- Re-emphasized a "fair share" voluntary participation in Medicaid whereby all Mississippi physicians would provide services to a percentage of Medicaid patients in their practice that is at least equal to the Medicaid population in their respective county.
- Commended the members of the Mississippi Board of Medical Licensure and its Executive Director for their efforts in enforcing the medical practice act.
- Directed the Council on Legislation to study the current operations of Blue Cross-Blue Shield of Mississippi and make recommendations concerning the company's exemptions from the state's insurance laws and non-participation in the state guarantee fund and the need for legislative action in the 1992 Regular Session of the Mississippi Legislature to address any existing inequities.
- Directed the Board of Trustees to pursue any means available to ensure that the Mississippi Division of Medicaid implement the OBRA'89 requirements intended to improve access to health care for children and pregnant women on Medicaid.
- Urged the AMA to continue its efforts to persuade the Health Care Financing Administration to recognize and fairly reimburse legitimate physician case management services for patients receiving home health care services.
- Endorsed legislation to require all restaurants and public buildings to be tobacco free environments.
- Directed that findings and recommendations of the Mississippi Chapter, American Academy of Pediatrics, dealing with waste disposal be endorsed by MSMA and sent to local elected officials, hospital administrators and MSMA members, and the latter be urged to present and monitor the findings and recommendations.
- Commended and urged the membership to utilize a Medicare Advisory Committee recently appointed to resolve difficulties between physicians and the Medicare program. Also, directed publication of information on the Medicare claims denial process in the Journal MSMA.
- Directed that the association convey its support for improving access to health care to the Mississippi Congressional Delegation, the Governor, the Mississippi Legislature and the public and inform the Mississippi Congressional Delegation and their staff about the various proposals for improving access to health care supported by elements of organized medicine.
- Commended the Junior League of Jackson and all others who participated in the planning and construction of the Mississippi Children's Cancer Clinic and directed that a resolution be presented to the Junior League of Jackson in this regard.



- Urged all MSMA members and their spouses to participate in activities of the Mississippi Medical Political Action Committee during this critical election year for state legislative officers.
- Increased the MSMA president's stipend from \$2,000 to \$6,000 annually in recognition of the increasing time the president is spending on MSMA business.
- \* Endorsed athletic pre-participation exams; encouraged physicians to give these exams with consideration for ability to pay and utilizing a standardized form; and urged continued efforts with the Mississippi Coaches Association to develop programs to reduce the incidence of athletic injuries.
- \* Directed the association to continue to support activities to monitor agricultural chemical use and its effects on man; and urged the Mississippi State Department of Health to code death certificates by occupation; and urged the association and its component societies to sponsor educational programs on the use and effects to agricultural chemicals.
- \* Urged the AMA to support efforts of the U.S. Surgeon General to address health problems associated with agricultural endeavors.
- \* Recommended that the MSMA Environmental Protection Committee study the need for food labeling legislation.

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### Serving on Reference Committees of the House were:

#### *Reference Committee on Rules and Order of Business*

F. Thomas Carey, MD, Chairman  
 Mathew J. Page, MD  
 Candace E. Keller, MD

#### *Reference Committee A (Reports of Officers, Board of Trustees and Councils)*

Thomas C. Fenter, MD, Chairman  
 Leslie E. England, MD  
 George Ball, MD  
 P. Hal Moore, Jr., MD  
 John F. Lucas, III, MD

#### *Reference Committee B (Reports of Officers, Board of Trustees and Councils)*

John R. Shell, MD, Chairman  
 George E. Abraham, MD  
 Billy Long, MD  
 Edward J. Schumski, MD

#### *Credentials Committee*

Don Q. Mitchell, MD, Chairman  
 John J. Cook, MD  
 David G. Hall, MD

#### *Reference Committee on Constitution and Bylaws*

Eric E. Lindstrom, MD, Chairman  
 Chester Masterson, MD  
 Jack C. Evans, MD

#### *Nominating Committee*

Mal G. Morgan, MD, Chairman  
 Edwin M. Hemness, MD  
 William B. Hunt, MD  
 Barney J. Guyton, MD  
 Julian C. Henderson, MD  
 Richard F. Riley, MD  
 Jack C. Evans, MD  
 Bill M. Wansley, MD



## MSMA AUXILIARY

The MSMA Auxiliary had an excellent meeting this year. A special guest for the session was AMA Auxiliary President Norma Skoglund. Ms Skoglund is pictured, upper right, with Merrell Rodgers, center, immediate past president MSMA Auxiliary and Sylvia Walker, right, MSMA Auxiliary President.

MSMA Auxiliary officers for 1991-92 pictured, at right are from left, Nancy Bush, recording secretary; Lynn Duncan, health projects; Kathy Carmichael, president-elect; Sylvia Walker, president; Karen Stephens, membership; Peggy Crawford, parliamentarian and Kathy Stumme treasurer.

Seventy-nine auxiliaries, below, registered and attended the general session held on Friday, May 17.





## Special Meetings



*Wives of MSMA Past Presidents*



*Past Presidents of the MSMA Auxliary*



*The Fifty-year Club*



*MSMA Past Presidents*



*MSMA Past Presidents*



## Exhibits and Section Meetings



*Dr. Stanley Hartness visited the exhibit hall.*



*Members attended the Young Physicians Section & Hospital Medical Staff Section joint meeting.*



*Visiting the exhibits, from left, Dr. James G. Thompson, Dr. William L. Lotterhos and Dr. Paul Moore, Sr. and an exhibitor.*



*The Medicine Plenary Session*



*Dr. Myron Lockey visited the exhibit hall.*



## President's Reception



*Dr. and Mrs. J. Elmer Nix and their daughter Georgia greeted guest attending the President's reception held at the Gulf Marine Park in Biloxi.*



*MSMA members and guest, above and below, attended the President's reception.*



*Attending the reception were, from right, Dr. Bill Gates, Dr. John Tupper, President of the AMA and Linda Gates.*



*Dr. Dewitt G. Crawford, center, and his wife Peggy, left, enjoyed the reception with Sarah Ann Owen, right.*



*Dr. Walter Gunn, left, enjoyed visiting with Dr. John Patterson, right, and his wife Maxine, center.*



## MSMA and MSMA Auxiliary Membership Party



*Dr. E. M. Hemness, left, and Drs. Ellis and Nina Moffit enjoyed the President's Reception.*



*The Membership party was held Saturday evening with entertainment provided by Mr. Gary Ellison of Missouri.*



*Dr. David Steckler and his wife, Dale .*



*Dr. Sidney Graves, center, visits with Dr. Eric McVey and his wife Donna and Dr. Candace Keller, right.*

*Below, Karen Stephens at the microphone, announces the winners of the Auxiliary Silent Auction with the help of Dr. Jimmy Waites.*



*Dr. Thad Waites, center, and his wife Gerry, right, visit with Kathy Carmichael, left, during the MSMA and MSMA Auxiliary Membership Party.*





## House of Delegates



*Dr. J. Elmer Nix, left, received his past president's pin from incoming MSMA President Dr. James C. Waites, right, during the closing session of the 123rd House of Delegates.*

*Dr. Waites, right, repeats the oath of office as MSMA president. The oath was administered by Dr. Lee Rogers, left, chairman of the Board of Trustees, and Charles Mathews, MSMA executive director, center.*



*Dr. William C. Gates addressed the House of Delegates after his election as MSMA president-elect.*

*Dr. Eric McVey, vice-speaker presided.  
Dr. George Ball, below, was the winner of the \$750 Technical Exhibit attendance prize. His name was drawn for the box of other physicians who visited the 65 technical exhibits.*

*Below, Dr. Van Lackey of Jackson Oncology Associates accepts the first place Scientific Exhibit Award from Dr. Don Mitchell.*





# Thanks to Our Exhibitors

The MSMA expresses appreciation to the following exhibitors, who participated in the Technical Exhibit during the 123rd Annual Session.

Abbott Laboratories  
Agape Data Systems  
Andgate Technology, Inc.  
Automated Health Systems, Inc.  
BFI Medical Waste Systems  
Bedsole Surgical Supply  
BESCO Office Products  
CSC Health Care Systems  
Central MS Health Care at Home  
Charter Hospital of Jackson  
CIBA Pharmaceutical Company  
Circadian  
Cothorn Computer Systems, Inc.  
DP Associates, Inc.  
Emerson, Stokes, Elliot, & Harper, CPAs  
Encyclopedia Britannica USA  
Geigy Pharmaceuticals  
Genentech, Inc.  
Glaxo, Inc.  
Healthcare Suppliers, Inc.  
I.C. Systems  
Independent Computer Service  
Insurance Corporation of America  
Jackson Recovery Center  
Janssen Pharmaceutica  
Key Pharmaceuticals  
Knoll Pharmaceuticals  
Lanier Voice Products  
Medical Assurance Company of MS  
Medical Pathology Laboratory, Ltd.  
Merck Sharp & Dohme

Miles, Inc.  
MS Baptist Chemical Dependency Center  
MS Cattle Industry Board  
MS Foundation for Medical Care  
MS Impression Products  
MS Methodist Rehabilitation Center  
MS Physicians Insurance Company  
MS State Department of Health  
MSMA Benefit Plan and Trust  
MSMA-Sponsored Retirement Income Program  
Parke-Davis  
Pfizer Labs  
Pine Grove  
Professional Nursing Services  
Puckett Laboratory  
Roche Labs  
Salcris Systems, Inc.  
Sandoz Pharmaceuticals  
Schering Corporation  
Sims Prosthetics  
Smith, Kline, and Beecham  
Southern Medical Association  
Summit Pharmaceuticals  
The Doctors' Company  
The Trusty Company, Inc.  
The Upjohn Company  
Travelers Medicare  
Weight Watchers  
Wimbish, Jon B. and Associates  
Wyeth-Ayerst Labs





## MSMA Membership Benefits

Representation, advocacy, public relations and support of professional ethics are some of the reasons MSMA exists for its members. These are the intangible but important benefits of membership which MSMA seeks to provide through member participation. There are also more tangible benefits which the association provides its members. Illustrated here are the MSMA-sponsored programs for such member needs as insurance and practice management support. These programs are listed below.

### HEALTH INSURANCE

MSMA members who are organized as PAs and wish to provide health insurance coverage for their employees are eligible to participate in a self-insured 501(c)(9) trust sponsored and administered by a subsidiary of the association. All MSMA members are also eligible to apply for health insurance programs offered by the American Medical Association. For further information contact Jackye Wiebelt at MSMA Diversified Services, Inc.

### MEDICAL MALPRACTICE INSURANCE

The Medical Assurance Company of MS (MACM) was sponsored and organized by MSMA in 1976 to provide a stable market for medical liability insurance to eligible members of the association. More than 1500 Mississippi physicians are currently insured by MACM and extensive physician leadership is involved in all phases of MACM's operations. For further information call MACM.

### DISABILITY INCOME INSURANCE

Based on careful evaluation of the market and periodic re-evaluation, MSMA endorses a disability income insurance program. MSMA members receive a discount and are assured of coverage by a reputable national company with a track record of writing coverage for professionals. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

### LIFE INSURANCE

MSMA members by virtue of their membership in the AMA are eligible for a variety of life insurance programs sponsored by the AMA. Because of their size these programs can be offered at low cost group rates. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

### FINANCIAL/RETIREMENT PLANNING

MSMA members by virtue of their membership in the AMA are eligible to participate in AMA Investment Advisors, Inc. This wholly owned investment subsidiary of the AMA offers a wide range of investment opportunities tailored specifically for physicians. For further information call AMA Advisers.

### PRACTICE MANAGEMENT

Through an arrangement with the AMA Department of Practice Management, MSMA periodically conducts practice management workshops for physicians' office personnel. These workshops cover a broad range of topics for CPT-IV coding to patient surveys. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

### DEBT COLLECTION SERVICE

Based upon sponsorship by medical associations in many states, IC System is endorsed by MSMA to perform debt collection services for offices and clinics of member physicians. IC System has a proven national track record as a debt collection service. For further information call Robert Kidd at MSMA.

### MEMBERSHIP HOTLINE

The American Medical Association provides a toll free national WATS for any member to call to inquire about programs and policies of the association. Inquiries about MSMA programs and policies can also be made over an in-state WATS.

**MSMA and MSMA Diversified Services** - 735 Riverside Drive, Jackson, MS 39202-1166; 601-354-5433 or 800-898-0251 (In-State-Wats).

**AMA Advisers** - 200 N. LaSalle Street, #535, Chicago, IL 60601, 800-525-0864.

**AMA and AMA Membership Hotline** - 515 North State Street, Chicago, IL 60610; 800-AMA-3211.

**Medical Assurance Company of MS** - 735 Riverside Drive, Jackson, MS 39202-1166; 601-353-2000 or 800-325-4172 (In-State Wats).



## Physicians Recognition Award

Three MSMA members were named recipients of the AMA Physicians' Recognition Award in March and April, 1991. This award is presented by the American Medical Association to Physicians who have voluntarily completed the specified number of continuing education hours. Physicians can receive the PRA certificate valid for one, two, or three years. For a one-year award, physicians report 50 hours of continuing medical education, including a minimum of 20 hours of Category 1; for the two-year award, physicians report 100 hours CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1. These three individuals are presented below by medical society.

**Central**  
**Bonnie Noe Woodall, MD**

**East Mississippi**  
**Norma E. Murillo-Smith, MD**

**Northeast**  
**David Bradley Ellis, MD**

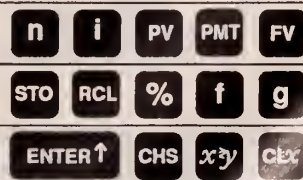
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## **Personals**

**Harris G. Barrett** of Pascagoula has passed the certification examination of the American Society of Addiction Medicine (ASAM).

**Stephen Beam** of Hattiesburg recently attended the American Occupational Health Conference.

**David Bomboy** of Hattiesburg recently attended an advanced Microscopic Lumbar Discectomy Workshop at St. Louis University.

**Dudley S. Burwell, Jr.**, of Biloxi has been awarded fellowship in the American Academy of Orthopedic Surgeons.

**Donald H. Butts** of Jackson has

been named medical director at Methodist Medical Center Jackson.

**Greg Childrey** of Columbus presented a program on *Estrogen Replacement Therapy* at the GTRMC conference center.

**Richard Conn** of Hattiesburg recently presented a paper entitled *New Techniques for Reducing the Need of Blood Transfusions at Total Joint Replacements for Arthritis* at the annual meeting of the Mississippi Orthopaedic Society held in Tuscaloosa, AL.

**Daniel P. Dare** of Vicksburg received board certification from the Arthroscopy Board of North America. He also announces the relocation of his practice in Orthopedic Surgery to Southern Orthopedics, Sports Medicine and Rehabilitation

Clinic, One Medical Plaza Drive, Vicksburg.

**Robert E. DeCoux, Jr.**, of McComb has recently joined the staff of Hattiesburg Clinic for the practice of gastroenterology.

**David Bradley Ellis** of New Albany has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians (AAFP).

**James V. Ferguson, Jr.** of Greenwood has been named to the University of Mississippi Alumni Association Board of Directors.

**Ben P. Folk, III** of Greenville has been elected to Fellowship in the American College of Physicians.

*"A Sign of the Times!"*



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**Jim Gordon** of Tupelo has performed a new surgical procedure that combines ultrasound guidance with laser delivery to treat non-cancerous enlarged prostates.

**Franklin R. Hayden** of Poplarville announces his retirement from the practice of medicine on June 26, 1991.

**Charles R. Hogue** of Yazoo City has completed a course of study in geriatric medicine offered by the Harvard School of Medicine in Boston.

**Glen Hunt** and **Greg Patton** of Oxford announce the relocation of their office to 1204 Medical Park Drive.

**Joseph E. Johnston** of Mt. Olive has been elected as vice president of

the American Board of Family Practice.

**Carl Kellum** of Tupelo has been elected to Fellowship in the American College of Physicians. He has also associated with Internal Medicine Associates of Tupelo for the practice of Gastroenterology.

**LeDon Langston** of McComb has been elected president of the University Medical Center Obstetricians and Gynecologists Alumni Association.

**William A. Long, Jr.** of Jackson spoke on adolescent medicine at a special seminar at the Hinds Community College campus in Vicksburg.

**David A. Makey** of Meridian has joined the medical staff of Laird

Hospital, Meridian.

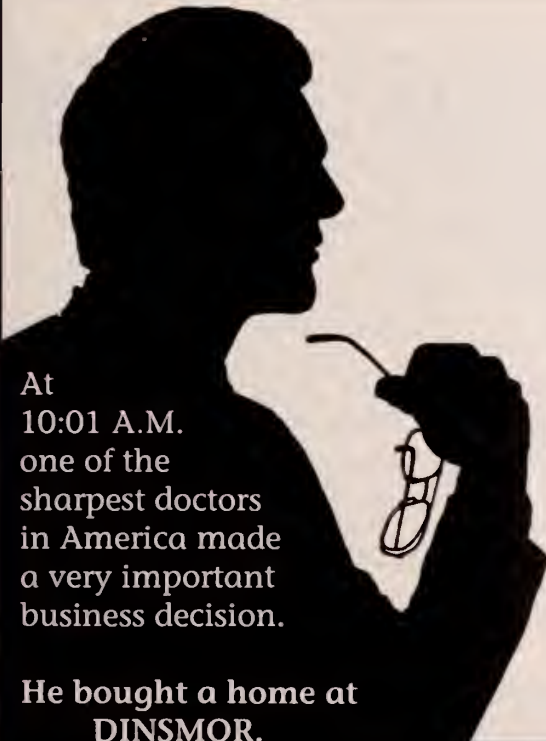
**Keith W. McLarnan** of Iowa has associated with Hattiesburg Clinic in the practice of neurology.

**Tom Oaks** of Tupelo recently received his Board Certification with the American Board of Neurology and Psychiatry.

**Tim Reynolds** of Newton has joined Rush Hospital/Newton's medical staff in internal medicine.

**Shelby C. Reid** of Corinth has associated with The Edmondson's Medical Specialties, Inc. specializing in family practice and internal medicine.

**Buddy Savoie** of Jackson was an instructional course lecturer on arthro-



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scopy of the wrist at the American Academy of Orthopaedic Surgeons Fifth Annual Meeting in Anaheim, CA. He also taught the instructional course on arthroscopy of the wrist at the Tenth Annual meeting of the Arthroscopy Association of North America in San Diego.

**William D. Stephens** of Jackson has associated with The Medical Clinic, PA for the practice of internal medicine.

**Jacob Skiwski** of Columbus presented a program on *Infant Care* at Willowbrook Solarium.

**Hildon H. Sessums, Jr.** has completed the medical review officer training course of the American College of Occupational Medicine.

**David Steckler** of Natchez was honored as Natchez Citizen of the

Year by the Natchez Democrat.

**Michael Taleff** of Meridian announces the relocation of his practice to 2420 11th Street, for the practice of diseases and surgery of the eye.

**Steven A. Webster** of Laurel announces the opening of his cardiology practice in Laurel.

**Tom Wooldrige** of Tupelo spoke to the Hospital staff in Russellville, AL on the *Role of Calcium Channel Blockers in Treatment of Hypertension*. He also spoke to the Golden Triangle Medical Center staff in Columbus, MS on *ACE Inhibitors and Preservation of Renal Function*.

**Victor W. Yawn** of Jackson has been named chief of staff at Methodist Medical Center.

## For Comments or Queries

The editors of *JOURNAL MSMA* invite you to comment on any material that appears in or is absent from the publication. If you have a query or comment, please sent it to: The Editor, *Journal MSMA*, PO Box 5229, Jackson, MS 39296-5229.

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name of individual placing order

\_\_\_\_\_  
purchase order #

\* (Meets requirements of Mississippi Claim Form Laws — S.B. #2673, 1985 Regular Session, Mississippi Legislature).



# Meetings

## National and Regional

American Medical Association, Annual Meeting, June 23-27, 1991  
Chicago. James S. Todd, MD, Executive Vice President, 515 N.  
State St., Chicago, IL 60610

## State and Local

Mississippi State Medical Association, 124rd Annual Session, April  
29-May 3, 1992, Jackson, Charles L. Mathews, Executive Direc-  
tor, 735 Riverside Drive, PO Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July  
31-August 4, 1991, Biloxi, MS. Leontine Stevens, Executive Sec-  
retary, PO Box 1215 Ridgeland 39158.

Amite-Wilkerson Counties Medical Society, 3rd Monday, March,  
June, September, December, James S. Poole, Secy., The Gloster  
Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October,  
December, 6:30 p.m., Primos Northgate Restaurant, Jackson.  
Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson  
39202. Counties: Hinds, Leake, Madison, Rankin, Scott,  
Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00  
p.m., Claiborne County Hospital, Port Gibson, D.M. Segrest,  
Secy., PO Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday,  
April, and 1st Wednesday, November, 2:00 p.m., Clarksdale,  
Rodney Baine, Secy., PO Box 1364, Clarksdale, MS 38614.  
Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and Novem-  
ber. James E. Clarkson, Secy., PO Box 128, Biloxi 39533. Coun-  
ties: Hancock, Harrison.

Delta Medical Society, 2nd Wednesday, April and October. Walter  
H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties:  
Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSoto County Medical Society, 3rd Thursday, February and Aug-  
ust, 1:00 p.m., Kenny's Restaurant, Hernando, Malcolm D.  
Baxter, Jr., Secy., 124 W. Commerce St., Hernado 38632.  
County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April,  
June, October, December. Charles L. Wilkinson, Secy., Mail: Ms.  
Jenkins, PO Box 4053, Meridian 39305. Counties: Clarke,  
Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society. Meetings scheduled quarterly,  
David G. Hall, Secy., 150 Jeff Davis Blvd, Suite 130, Natchez  
39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March,  
June, September, January, P. Morris Parsons, PO Box 590,  
Ackerman 39735. Counties: Attala, Carroll, Choctaw, Granada,  
Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Tuesday, March, June,  
September, November, December. Tom E. Stanford, Secy., PO  
Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chicka-  
saw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo,  
Union.

North Mississippi Medical Society, 1st Thursday, April, September,  
December. Joe T. Harris, Secy., 2173 South Lamar Street, Oxford  
38655. Counties: Benton, Lafayette, Marshall, Panola, Tate,  
Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June,  
September, December. J. C. Griffing, Secy., Crosby Memorial  
Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September,  
December, Thomas F. Adams, Secy., 2104 5th Street North,

Columbus, MS 39701. Counties: Clay, Oktibbeha, Noxubee,  
Lowndes.

Singing River Medical Society, quarterly, December, March, June  
and September. Paul H. Moore, Sr., Secy., 719 Beach Blvd., Pas-  
cagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March,  
June, September, December. Julian T. Janes, Secy., PO Box 1910,  
McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln,  
Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June,  
September, December. A. J. Jackson, 415 South 28th Ave.,  
Hattiesburg 39401. Counties: Covington, Forrest, George,  
Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry,  
Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, May, Sep-  
tember, November, 6:30 p.m. Maxwell's Restaurant, Vicksburg.  
Robert C. Clingan, Secy., 1202 Mission Park Dr., Vicksburg  
39180. Counties: Issaquena, Sharkey, Warren.

## Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations  
have been accredited in accordance with the "Essentials of the Ac-  
creditation Council for Continuing Medical Education (ACCME)"  
and the Council on Medical Education of the MSMA. Information  
concerning CME programs for physicians offered by these accred-  
ited sources may be obtained by writing the Director, Continuing  
Medical Education, at the individual institution or organization.

Council on Scientific Assembly  
Mississippi State Medical Association  
735 Riverside Drive  
Jackson, MS 39202-1166

North Mississippi Medical Center  
830 Gloster Street  
Tupelo, MS 38801

Forrest General Hospital  
Mamie Street and Highway 49 South  
Hattiesburg, MS 39401

Mississippi Baptist Medical Center  
1225 N. State Street  
Jackson, MS 39202

Gulf Coast Community Hospital  
180 DeBuys Rd.  
Biloxi, MS 39531

Jefferson Davis Memorial Hospital  
Sergeant Prentiss Drive  
Natchez, MS 39120

King's Daughters Hospital  
Highway 51 North  
Brookhaven, MS 39601

Charter Hospital of Jackson  
Lakeland Drive  
Jackson, MS 39208

Biloxi Regional Medical Center  
150 Reynoir St.  
Biloxi, MS 39533

Jeff Anderson Regional Medical Center  
2124 14th St.  
Meridian, MS 39301

Park View Regional Medical Center  
100 McAuley Dr.  
Vicksburg, MS 39180

Methodist Medical Center  
1850 Chadwick Dr.  
Jackson, MS 39204

Golden Triangle Regional Medical Center  
2520 Fifth St., North  
Columbus, MS 39701

Northwest Mississippi Regional Medical  
Center  
Hospital Dr.  
Clarksdale, MS 38614

Singing River Hospital  
2809 Denny Ave.  
Pascagoula, MS 39567

Greenwood Leflore Hospital  
1401 River Rd.  
Greenwood, MS 38930

Memorial Hospital at Gulfport  
4500 13th St.  
Gulfport, MS 39501

Baptist Memorial Hospital of North  
Mississippi  
Highway 7, South  
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital  
969 Lakeland Dr.  
Jackson, MS 39216

Delta Regional Medical Center  
1400 E. Union  
Greenville, MS 39704

Methodist Hospital  
5001 W. Hardy St.  
Hattiesburg, MS 39401



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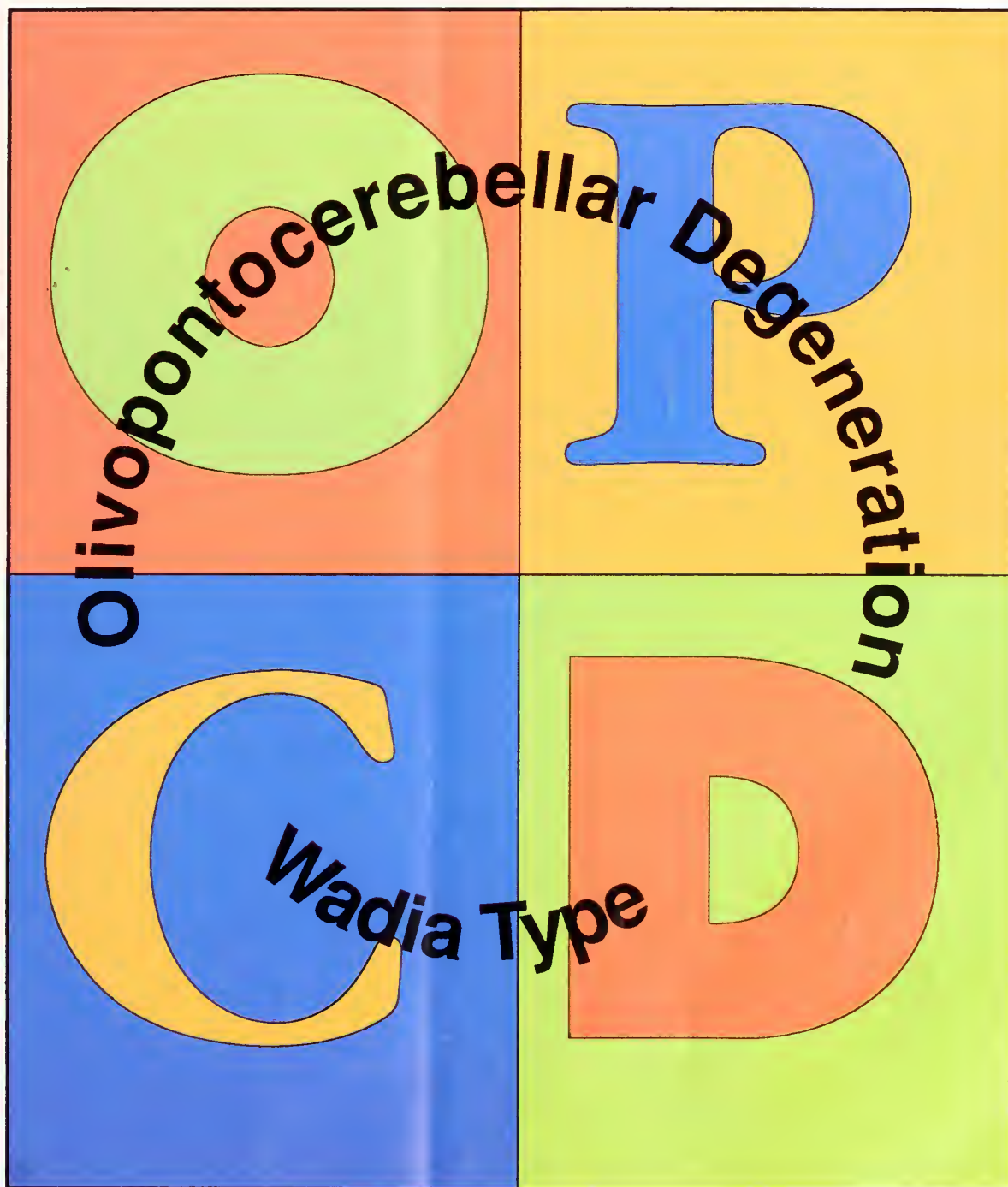


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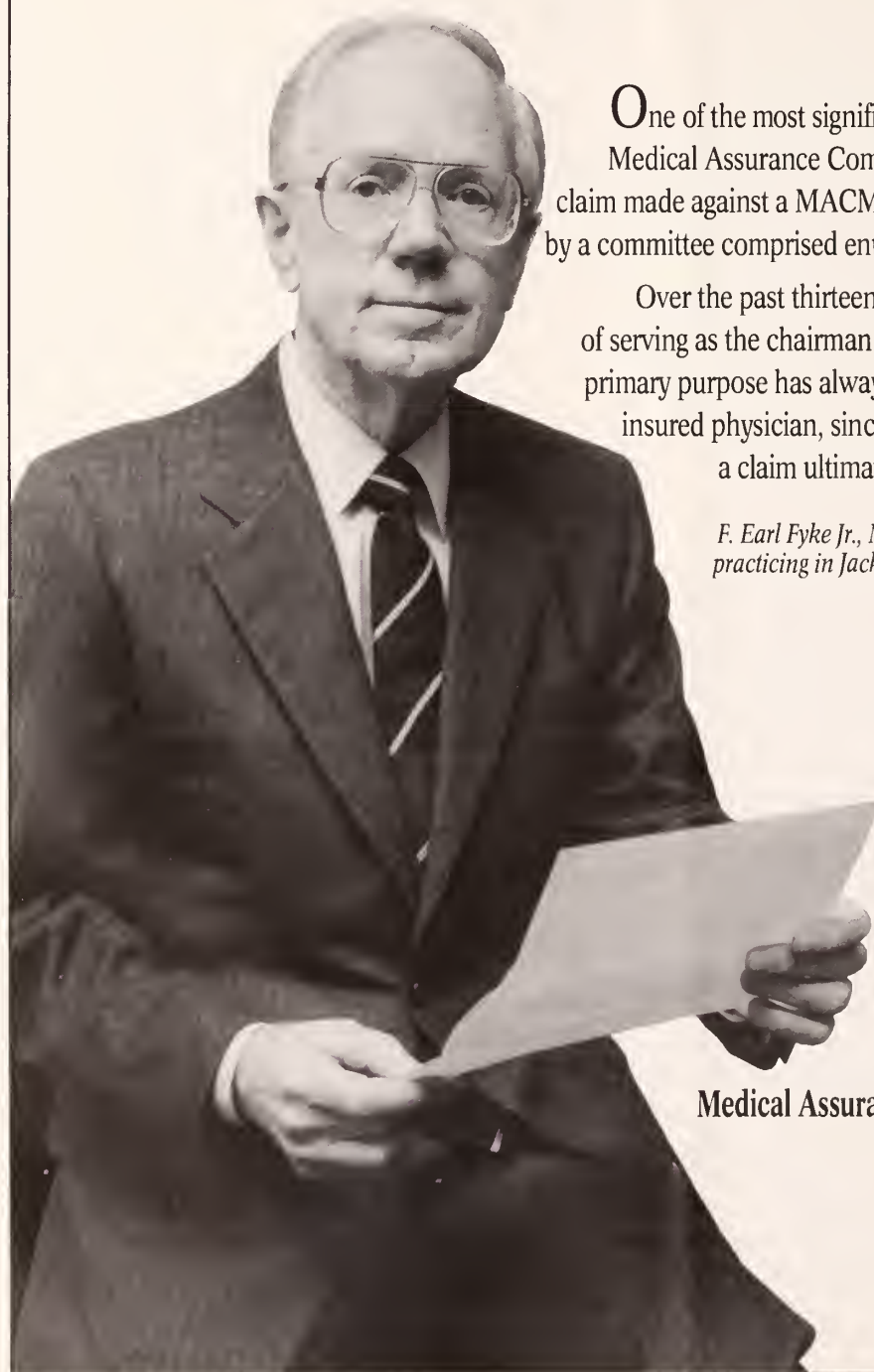
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JULY 1991 VOLUME XXXII

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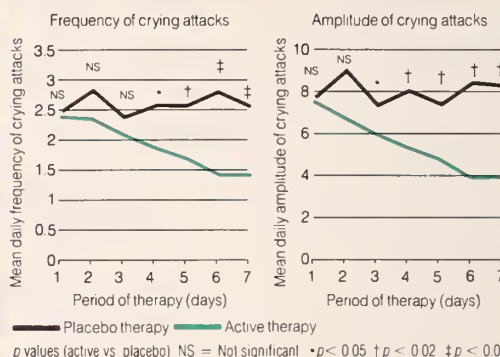
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1. Kanwallit SS, Jasbir KS. Simethicone in the management of infant colic. *Practitioner*. 1988;232:508

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## Medicare Physician Payment Reform in Jeopardy

On June 5, the Health Care Financing Administration published the Notice of Proposed Rule Making (NPRM) on the new Medicare payment system for physician services. As you well know Medicare physician payment reform is in jeopardy. If you have not contacted your congressman please do so.

Payment reform was accepted on the premise that the new system would be simpler; would be implemented through a transition that minimizes disruption; and would provide increased funding for rural and primary care services. Critical to payment reform is the adequacy of the conversion factor (the element of payment reform that changes relative value units to dollars). The NPRM reflects a devastating 16% reduction in the initial conversion factor. Almost all elements of organized medicine have agreed that our number one priority on the NPRM will be to restore the conversion factor to its intended level.

### Elements of Conversion Factor Problem

- The NPRM reflects HCFA's unfounded belief that physicians will increase the number of services to Medicare patients to offset any reduction in payment. The NPRM includes this "behavioral" offset despite the fact that HCFA-sponsored research has failed to prove this theory. Congress already has a tool to deal with volume increases - it is called the Medicare Volume Performance Standard (MVPS). The MVPS is currently being used to adjust physician payments as a result of volume increases. Applying a behavioral offset is redundant.
- HCFA's position is that any adjustments to physician payment must keep Medicare spending at current levels (budget neutral) and must be applied just to the conversion factor. In fact, the conversion factor will only affect 30% of Medicare services in 1992 due to the promised 4-year transition period. Since only 30% of Medicare services will be affected by the conversion factor, HCFA believes its adjustments to the conversion factor must be tripled in order to achieve budget neutrality.
- To minimize the impact for physicians, Congress assured that increases for primary care services would be accelerated while reductions would be implemented more slowly. HCFA has decided this does not meet budget needs and to correct the "asymmetry" by further reducing the conversion factor.



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# Wadia Type Olivopontocerebellar Degeneration: A Case History and Review of Literature

CLINT WASHINGTON, MSNS, M-2  
ED GORE, MD, ABFP  
Jackson, Mississippi

Menzel (1981) was the first to report a family with olivopontocerebellar degeneration (OPCD).<sup>1</sup> The OPCDs are a heterogeneous group of familial diseases characterized by progressive degeneration of neurons in the cerebellar cortex, inferior olivary nuclei, and basis pontis.<sup>2</sup> Neurons of the pontine nuclei and inferior olivary nuclei have a common origin in the fourth ventricle. The primary degenerative process occurs in these nuclei, and degeneration of the cerebellum is secondary.<sup>3</sup> Other parts of the central nervous system such as the cerebral cortex, spinal cord, and the basal ganglia may be affected.<sup>2</sup>

Essential clinical features are progressive ataxia, dysmetria, dysarthria, nystagmus, and slow saccadic eye movements. Other symptoms are spasticity, optic atrophy, late intellectual dysfunction, and distal sensory loss.<sup>5</sup> The most common of the inherited ataxic syndromes is characterized by ataxic gait and usually manifests between 25 and 45 years of age.<sup>4</sup> There may be modifications of these symptoms in different families.<sup>5</sup> There is no sexual predilection.

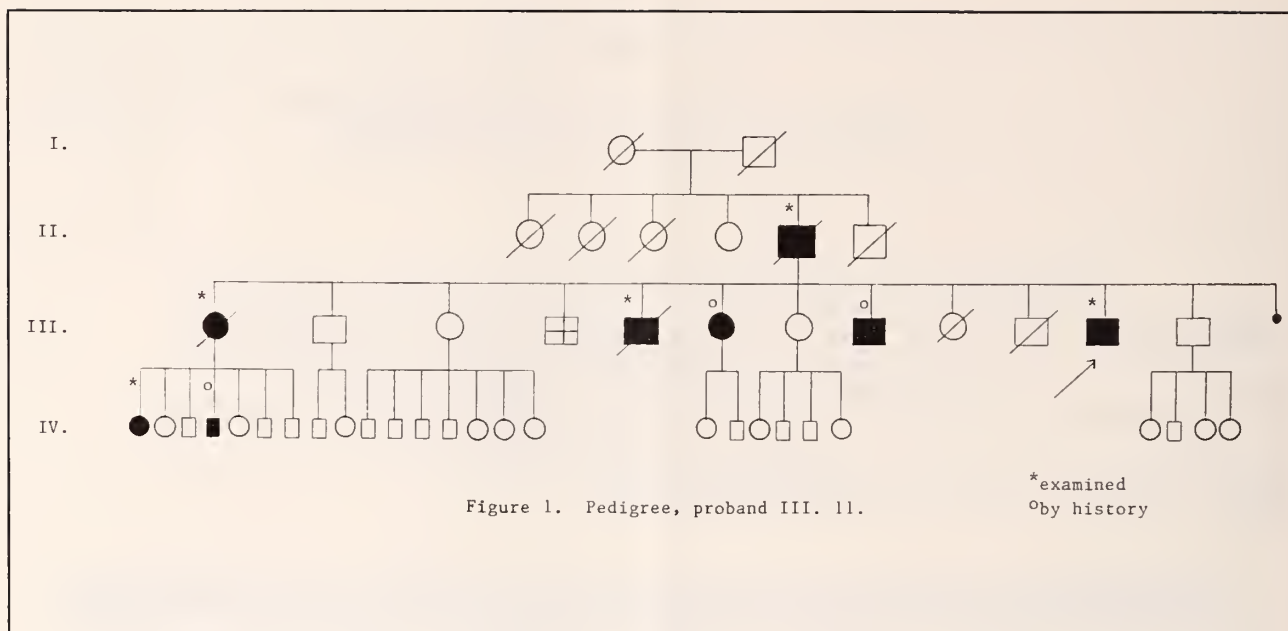
Several methods of classifying the OPCDs have been suggested. They have been classified based on

Olivocerebellar pontine degeneration of the Wadia type is characterized by progressive symmetrical cerebellar ataxia, slow eye movements, absent deep tendon reflexes, autosomal dominant inheritance, and onset between the second and fourth decades. The only available treatments are genetic counseling, social and psychological support, and physiotherapy. This article presents a case of this subtype of hereditary ataxia and a review of the literature.

hereditary type, sporadic group, spinal cord involvement, absence of spinal cord involvement, dominant type, recessive type, and atypical type.<sup>2</sup> Classification has been cumbersome because of the variability in clinical presentation, the different inheritance patterns within similar clinical pictures, and the inability to delineate various underlying metabolic defects.<sup>6</sup>

Wadia and Swami (1971) were the first to classify





a subtype of OPCD differentiated by its slow saccadic eye movements.<sup>2</sup> The following case is of a black male, aged 30, suffering from autosomal dominant cerebellar ataxia with slow saccades and peripheral neuropathy (Wadia type).

### CASE REPORT

The patient (proband) (Figure 1, III. 11) is a 30 year old black male who first sought medical attention at age 25 because of a history of a slowly progressive ataxia and dysarthria. The patient, by history, had a normal childhood. He reportedly became "aggressive" around the age of 15. About the same time, he was temporarily placed in special education. Because of his staggering walk and slurred speech, he was once mistakenly arrested for drunkenness. The patient had no history of drug or alcohol abuse.

At the age of 28, he was hospitalized for a head injury sustained in an MVA. He later attributed most of his problem to the head injury; however, a cranial computerized tomography (CT) revealed no abnormality. During the next few years, his course was characterized by gradually increasing difficulty with walking and speaking. The patient became unable to continue his work as a garbage collector. He was very concerned about his weight loss of approximately 30 pounds in the two years prior to the examination.

### Family History

The patient's paternal grandparents died at an old age of unknown causes (Figure 1). His father died at age

64 from the same symptoms, and his mother, age 67, is still living and in good health. His mother had 13 pregnancies including two infant deaths and two spontaneous abortions. Of the remaining 8 siblings, 2 died at ages 30 and 48 with a neurological disorder, and 2 currently have symptoms at ages 38 and 40. Two brothers, aged 27 and 49, and two sisters, aged 39 and 48, have no signs of this familial disease. The patient also has a niece, aged 33, and a nephew, aged 27, that have symptoms. This pedigree contains 8 members in three generations that are affected by this disease.

Like the patient, each affected person in this pedigree suffered from stomach and/or leg cramps. His sister had to have a percutaneous endoscopic gastrostomy tube shortly before her death due to inability to swallow.

### Evaluation

The patient underwent a thorough evaluation by his local physician and by neurologists at the University of Mississippi Medical Center. The patient's mental status was within normal limits.

The patient had difficulty with his balance and walked with a wide-based ataxic gait. Unsteadiness was present in the performance of the Romberg test. He had definite dysarthria and slurring of the speech. The tongue protruded in the midline and showed no atrophy or fasciculation. There were no facial fasciculation.

Marked incoordination of the extremities was noted in the performance of alternating movements and fin-



ger-to-nose and heel-to-toe movements. Position, vibratory, tactile, and pain modalities were all intact. Reflexes were decreased to absent and plantars were downgoing. Strength was good and there was no peripheral atrophy or fasciculation. Muscle tone was normal. Eye movements were slow and somewhat limited in upward gaze.

An electromyogram (EMG) was done, and evidence of distal neuropathy was found. No fasting blood was drawn nor was an MRI or CT attainable.

### Discussion

This case is an example of the slow-eye-movement form of OPCD described by Wadia. Very few cases of this type have been reported in the United States. This may represent the first pedigree with the slow-eye-movement type in Mississippi.

The two consistent clinical features are a slowing of the eye movements and a progressive cerebellar ataxia. The difficulty in walking, dysarthria, intention tremor, and incoordination of the limbs are due to the cerebellar disorder. Ocular examination reveals a slowing of the horizontal eye movements. This disorder is frequently unobserved because the effect on the movement may be subtle. Furthermore, a head-jerk usually occurs, keeping the gaze fixed. As the disease progresses, the eyes move more slowly affecting the vertical movement and producing a "staring" appearance. At this stage, a head-eye lag occurs because the head moves faster than the eyes. The cerebellar ataxia and ophthalmoplegia usually worsen simultaneously; however, ataxia may develop first.

Tendon reflexes are almost always effected. Initially, the reflexes are normal to exaggerated and become diminished to absent later as the disease advances.

This type of OPCD has a wide range of onset from 6 to 73 years of age; however, the disease begins between the ages of 15 and 40 years in most patients. Death usually occurs within 13 years after onset. Studies by Wadia show that this type OPCD is mostly autosomal dominant, but that spontaneous mutations and recessivity are possible. He states, "The clinical picture of a progressive symmetrical cerebellar ataxia and slow saccades, the absent deep tendon reflexes, and other lesser signs, the autosomal dominant inheritance and the onset usually between the second and fourth decades is striking enough to be easily recognized and the disorder classified into this subtype of hereditary ataxia, especially by those aware of this variety of OPCD." Unfortunately, the only treatments for this disorder to date are genetic coun-

seling, social and psychological support, and physiotherapy.<sup>1</sup>

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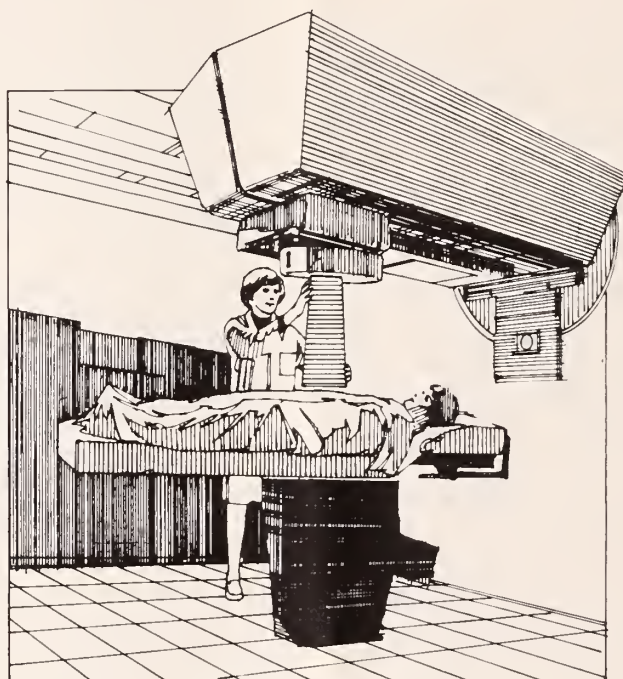
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# Necrotizing Fasciitis

GEORGE M. THURBER, MD, MS  
SHELBY K. BRANTLEY, Jr., MD  
SUMAN K. DAS, MD, FRCS, FACS, FRCS(Ed)  
Jackson, Mississippi

Necrotizing fasciitis is an insidious, lethal entity that requires immediate diagnosis and treatment. The etiology of the disease is ill-defined and although it is more common in immunocompromised patients, it can present in healthy patients of all ages.<sup>4,6</sup> Definitive diagnosis is based on an infectious breakdown of subcutaneous tissue and fascia along the fascial plane; if left unchecked, the process may progress to breakdown of muscle and skin.<sup>4,6</sup> Although no body site is exempt, the extremities, groin, abdomen, and buttocks are the most common areas of involvement.<sup>2,8,9</sup> Despite antibiotic therapy, mortality rates of up to 70-80% are still reported and early aggressive surgical debridement is mandated to reduce this rate.<sup>6,12</sup> The University of Mississippi Medical Center serves as a referral center for the initial or secondary management of these complicated cases; thus, a retrospective chart analysis was undertaken in an attempt to delineate any factors specific for this patient cohort.

## MATERIALS AND METHODS

All cases of known or suspected necrotizing fasciitis, whether initially or secondarily diagnosed at our institution between January 1, 1984 and July 1, 1989, were reviewed retrospectively. The parameters examined included age, immune status, initial lesion, vital signs at admission, antibiotic coverage, number of hours from diagnosis to surgery, organisms cultured from the wound, total number of hospital days, total number of operations, and outcome. A case report is also included to illustrate the usual presentation and successful management.

## RESULTS

Of a total of 39 patients, 25 were male and 14 were female with the group's mean age being 50.9 years (range 20 to 84). Etiologies of infection included soft

tissue abscesses (n=19), idiopathic cause (n=12), puncture injuries (n=5), and major trauma (n=3), with the perineum being the site most often affected (n=14). Other sites included the abdomen (n=11), extremities (n=10), sacrum (n=10), buttocks (n=8), groin (n=6), and back (n=3). Wound sites were most commonly described as tender, erythematous, indurated, and purulent. Four patients had wounds described as crepitant; no wound descriptions were listed for two patients.

Blood pressure, pulse rate, and temperature are good clinical predictors of the degree and severity of infection. Vital signs upon presentation to the emergency room or upon admission of this patient cohort had a broad range (see Table 1).

Admission Vital Signs of  
39 Patients With Necrotizing Fasciitis

	Temp. °F (n=35)	Res. Rate (n=32)	Heart Rate (n=37)	B.P. mmHg (n=38)
MEAN	99.5±2.2	23.0±16/min.	103.5±24.8/min.	121/69±21/28
MIN.	94.5	36	60	68/palp.
MAX.	104.0	5.4	156	170/120

Table 1: Admission vital signs of 39 patients presenting to the University of Mississippi Medical Center with necrotizing fasciitis.

In a search for immune compromise in these individuals, 14 patients (35.9%) were noted to be diabetic. Other causes for decreased immunity included renal failure (n=4), congestive heart failure and atherosclerosis (n=4), cancer (n=3), paraplegia (n=1), massive trauma (n=2), severe chronic obstructive pul-



monary disease (n=1), and morbid obesity (n=1). Nine patients had no medical history that would indicate impaired immune status.

Initial therapy in 36 patients consisted of broad-spectrum antibiotic coverage, most commonly penicillin (or a derivative) and an aminoglycoside with or without clindamycin (n=25). Other antibiotic combinations included cephalosporins and an aminoglycoside, clindamycin or vancomycin. Three patients were initially covered with a single agent, and one patient who was transferred to our facility had no record of initial antibiotic coverage.

The average time from presentation to surgery was 19.1 hours (range: 1-144 hrs). The average hospital stay was 19.7 days (range: 2-91). Each patient had an average of 2.17 operations (range: 1-8) inclusive of debridements and coverages, with the most common coverage option being that of allowing the wound to heal by secondary intention (22/35). Split thickness skin grafting was ultimately employed in 11 patients, one patient had flap coverage, and the records of four patients made no mention of coverage.

Of the 39 patients, responsible organisms were identified in 25. Cultures from one patient were positive of *Escherichia coli* alone, while two patients grew out only *Staphylococcus aureus*. One patient presented with herpes simplex virus-1 as the only identifiable organism. The remaining 21 patients has mixed wound infections with streptococcus (n=13), staphylococcus (n=10), *E.coli* (n=10), pseudomonas (n=4), and proteus species (n=4) as the predominating organisms.

Twenty-nine patients were discharged, two were transferred to other hospitals and lost to follow-up, and eight patients died. Nine of the entire patient cohort ultimately developed septic shock, of whom seven died. The two patients who recovered from septic shock were hospitalized for 20 and 91 days, respectively. The other recorded death was attributed to a pulmonary embolus. Of the eight patients who died, four had diabetes mellitus, two had sustained major degloving injuries, one had end stage renal disease, and one had no identifiable source of immune compromise. All eight patients had mixed infections: streptococcus (n=5), staphylococcus (n=2), clostridium (n=2), *E.coli* (n=2), pseudomonas (n=2), proteus (n=1), bacteroides (n=1), *Klebsiella* (n=1), *Fusobacterium* (n=1), and gram negative organisms (n=1). Seven of the eight patients who died were treated with an antibiotic regimen of penicillin (or a derivative) and an aminoglycoside with or without clindamycin. The other patient, who had sustained massive trauma, was treated with Piperacillin, Primaxin, and,

finally, vancomycin during the hospitalization.

Both patients who presented with massive degloving injuries died 21 days after the initial trauma. Four of the remaining six patients died within eight days of presentation, indicating that the infectious process was relatively far advanced prior to admission. The remaining two patients, both obese diabetics, presented with perineal abscesses, with one undergoing a total of four operations only to succumb to sepsis on hospital day 49. The other patient underwent an initial debridement 24 hours after admission, never improved clinically, and died on hospital day 16.

Vital signs at presentation were compared between survivors and nonsurvivors. An examination of Table 2 shows that the two groups are quite similar in almost every category. Of notable exception, however, are the parameters of age and blood pressure. Nonsurvivors were an average of ten years younger and admission blood pressures were also significantly lower, perhaps indicating a more advanced stage of disease in comparison to the group of survivors.

**Comparison of Vital signs and Hospital Course  
In Survivors vs Nonsurvivors**

	<u>NONSURVIVORS</u>	<u>SURVIVORS</u>
Age (years)	47.8 ± 11.2	58.1 ± 18.5
Temp. (F°)	99.0 ± 3.2	99.6 ± 2.0
Resp. rate	24.8 ± 6.5	22.6 ± 5.0
Blood pressure (mmHg)	104/39 ± 31.1/50.9	124/70 ± 21.7/17.8
Hours to surgery	18.4 ± 18.4	19.4 ± 29.6
Number of surgeries	2.0 ± 1.5	2.2 ± 1.8
Total hospital stay (days)	15.4 ± 14.7	20.9 ± 16.7

Table 2: Comparison of admission vital signs between survivors and nonsurvivors.

## CASE PRESENTATION

Patient E, as 53-year-old black male with a history of hypertension and adult onset diabetes mellitus, presented with a 10-to 14-day history of "swelling and tenderness" of the scrotum. A scrotal abscess was diagnosed and the patient was begun on a course of oral antibiotics with daily follow-up visits with his local physician. The abscess failed to improve and on the second day of outpatient follow-up, the patient was admitted to the local hospital for intravenous antibiotic therapy. His condition failed to improve, and he was transferred the following day to the University of Mississippi Medical Center when the infected area was noted to have become crepitant.

Vital signs upon arrival were as follows: tempera-



ture (oral) 99.1°F, pulse rate 116/min., respiration rate 24/min., and blood pressure 100/60. The scrotum and perineum were "swollen, tender, and crepitant." Immediate coverage with Ampicillin, Gentamicin, and Clindamycin was begun, and the patient was immediately prepared for surgery.

Within four hours of admission, the patient was taken to surgery and underwent a diverting colostomy, suprapubic catheterization, and wide surgical debridement of the penis, scrotum, and perineum (see Figure 1). A wound culture obtained intraoperatively revealed *Klebsiella*, *E.coli*, and enterococcus. A subsequent microbial sensitivity study led to a change in the antibiotic regimen to Primaxin and gentamicin. The wound was left open, packed with Kerlex and managed conservatively with frequent wet to dry dressing changes. The immediate postoperative day, he was returned to surgery for further debridement of the perineum and application of a split thickness skin graft to the penis, which was then granulating nicely. The operation was tolerated well and the graft achieved a 100% take (see Figure 2). Except for a minor yeast infection, the patient continued to do well with ag-



Figure 2: Clean, granulating bed after wide surgical debridement and local wound care consisting of wet to dry dressing changes and whirlpool therapy and skin grafting of the penis.

gressive local wound care consisting of wet to dry dressing changes three times daily. The remaining perineal defect was covered with a split thickness skin graft on the 19th day of hospitalization. The graft took well and there were no other complications (see figure 3). He was discharged on hospital day 29, and



Figure 1: Patient E after wide and adequate surgical debridement of the penis, scrotum, and perineum.

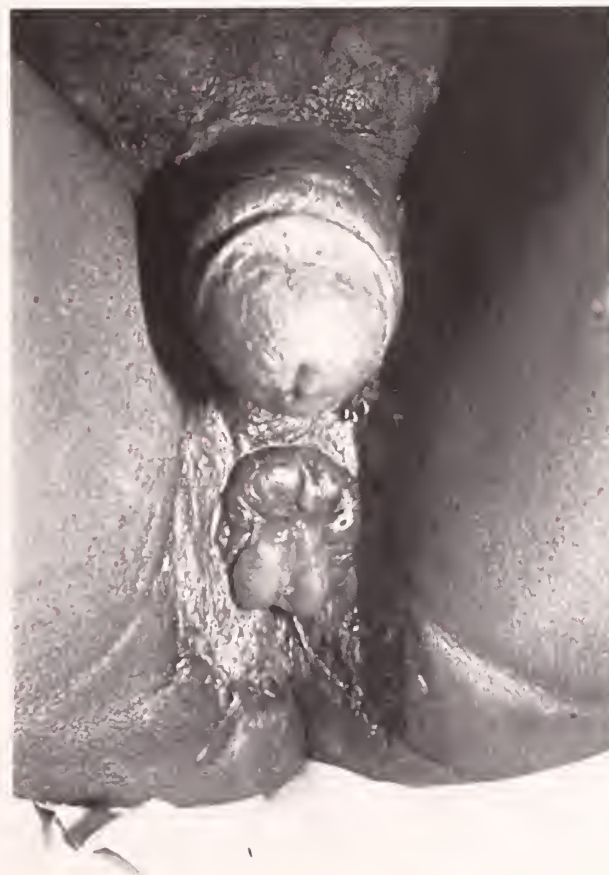


Figure 3: Secondary coverage of the remaining defect with a split thickness skin graft.



subsequent outpatient follow-up has shown him to be doing well. The suprapubic catheter has been removed and colostomy closure is planned in the immediate future.

## DISCUSSION

### History

Necrotizing fasciitis was initially described in 1871 by Confederate Army surgeon Joseph Jones, who reported an entity that he termed "hospital gangrene," the clinical manifestations of which were nearly identical to those presently ascribed to necrotizing fasciitis. According to his account, 2642 patients had this condition during the Civil War, with a mortality rate of 46%.<sup>1,2</sup> In 1924, Meleney's study of 20 cases of necrotizing fasciitis indicated that the necrosis was primarily subcutaneous in nature. He implicated hemolytic streptococcus as the causative organism and reported a mortality rate of 20%.<sup>3</sup> Two years later, Breuer and Meleney noted a symbiotic or mixed bacterial etiology for a case of necrotizing fasciitis that developed following surgery for a perforated appendix.<sup>4</sup> However, it was Wilson in 1952 who first used the term "necrotizing fasciitis" in his description of 22 patients with staphylococcal infections who presented clinically with infectious fasciitis.<sup>5</sup> Since that time, hundreds of cases of necrotizing fasciitis have been reported, with mortality rates ranging from 20 to 73% and with disparate etiologies and therapies.<sup>6</sup>

### Causes

The causes of necrotizing fasciitis vary widely and are apparently unpredictable; however, certain generalizations can be made. For example, almost every case of marine vibrio necrotizing fasciitis occurred following exposure of an open wound to warm salt water or raw shellfish.<sup>7,9</sup> Obese diabetic patients often present initially with perirectal or vulvar abscesses. These patients have the additional complication of fecal contamination, and a diverting colostomy is often employed to aid in the healing process.

Postsurgical infections primarily of the abdomen and perineum continue to be a common cause of necrotizing fasciitis despite extensive precautions. Kaiser et al. described 20 such cases, in which the most common organisms were clostridium, *E.coli*, Bacteroides, and anaerobic streptococcus. Using a "unified approach" to soft tissue infections, he achieved a mortality of only 8.3%.<sup>10</sup>

Of particular concern are two groups of patients who present with minimal signs of infection. The first

group consists of those seemingly healthy people who are later diagnosed with a disease such as diabetes mellitus or carcinoma. The second group consists of patients who are perfectly healthy, except for smoldering signs of necrotizing infection. In such patients, no "predisposing factors" exist that indicate the probability of necrotizing fasciitis. Unfortunately, diagnosis and debridement are often delayed with disastrous sequelae.

### Organisms

Prior to considering causative organisms involved in necrotizing soft tissue infections, one must establish certain definitions. According to Kaiser et al., four entities exist, i.e., clostridial cellulitis, clostridial myonecrosis, synergistic necrotizing cellulitis, and necrotizing fasciitis, all with different etiologies, organisms, and symptoms. They define necrotizing fasciitis as an infection, usually mixed, that affects fascia first and muscle later, and usually affects immunocompromised persons (e.g., those with diabetes or atherosclerosis).<sup>10</sup> Addison provided a more stringent definition of necrotizing fasciitis as he described six criteria proposed by Fisher to diagnose this entity: 1) extensive necrosis of superficial fascia with widespread undermining of skin; 2) moderate to severe systemic toxic reaction; 3) absence of muscle involvement; 4) no demonstration of Clostridia in wound or blood cultures; 5) absence of major vascular occlusion; and 6) intensive leukocytic infiltration, necrosis of subcutaneous tissue, and microvascular thrombosis on pathologic examination of debrided tissue.<sup>9</sup> Rea and Wyrick considered necrotizing fasciitis to be more of a clinical entity of varied polymicrobial etiology rather than a specific bacterial infection.<sup>9,11</sup> With advances in microbiology, especially anaerobic culturing techniques, came an increased realization that most cases of necrotizing fasciitis were of mixed bacterial etiology. The more common site-specific bacterial infections are hemolytic streptococcus, *E.coli*, staphylococcus, and Bacteroides affecting the leg and perirectal area, whereas *E.coli* and Enterococcus are more common in neglected perineal infections.<sup>8,13</sup> A similar composition is seen in the vulvar region of diabetics in which staphylococcus, *E.coli*, Bacteroides, and Peptostreptococcus have been identified most frequently.<sup>9</sup> This is compared to the necrotizing fasciitis most often seen post-surgically, in which clostridium, *E.coli*, Bacteroides, and anaerobic streptococcus are the most likely offending organisms.<sup>10</sup>

The wide variety of causative organisms and the need for immediate and comprehensive treatment sup-



port the wisdom of utilizing a unified approach to soft tissue infections. In addition, new causes, such as marine vibrios and *Acinetobacter*, appear as bacteriology and clinical awareness advance.<sup>7,12</sup>

### Treatment

Early diagnosis, wide surgical excision back to healthy uninvolved tissue, and broad-spectrum antibiotics effective against Gram positive, Gram negative and anaerobic organisms are the mainstays of treatment. The importance of early, extensive debridement cannot be overemphasized, as evidenced by Freishlag who reported a 70% mortality rate for those having surgical debridement more than 24 hours after recognition of infection as compared to 36% in those operated within 24 hours. Similarly, a lesser, tissue-conserving operation resulted in a 71% mortality compared to a 43% mortality with initial radical surgery encompassing all devitalized tissue.<sup>12</sup>

Antibiotic regimens usually consists of Clindamycin, and aminoglycoside, and penicillin or a cephalosporin as bacterial coverage before, during and after surgical debridement of the infection.<sup>10</sup> Antibiotic coverage is begun as soon as initial infection is suspected and continued until the debrided wound is well granulated with coverage modified based on organism sensitivities.

Early identification and aggressive surgical debridement influence mortality more than any specific antibiotic therapy. Other factors such as nutritional supplementation may play a role in increased survival. Majeski achieved mortality rates as low as 0% by using early debridement, broad-spectrum antibiotics and hyperalimentation consisting of 200% of basal calorie requirements.<sup>13</sup> As with any serious illness, it is implicit that resuscitation with fluids and oxygen should be used as needed.

### Coverage

Debridement can be, and often is extensive. With the infectious nature and the fact that further surgical debridement may be required, wounds are often allowed to granulate with a period of healing by secondary intention. Coverage options then depend upon defect size, location, and aesthetics. Defects in the perineum and abdomen are often covered by split thickness skin grafts after an adequate granulation bed has been established. Smaller defects, especially in limbs, are often allowed to heal by secondary intention. Of interest, Skef et al. described two cases of necrotizing fasciitis of the scalp that were treated by elevating the

scalp, debriding the fascia, and reapproximating the skin with drains in place.<sup>5</sup>

More extensive debridement may require more elaborate coverage. Amniotic membranes have been used as temporary wound dressings following an extensive debridement.<sup>14</sup> The patient in question required exposure of 20% of the body surface area, and following this temporizing measure the patient was subsequently given a split thickness skin graft and discharged on hospital day 72.

Flap coverage of large defects in necrotizing soft tissue infected patients requires additional considerations. The granulating bed must be adequate and free from disease. The limited number of flaps, extent of the operation, and possibility of reinfection must all be taken into account; however, this treatment option is now a part of our armamentarium and provides excellent coverage in selected cases.

### CONCLUSIONS

In our study, 39 patients were diagnosed as having necrotizing fasciitis. Eight patients died and two were lost to follow-up, a mortality rate of 21.6%. Four of the 14 diabetics in the study died, a mortality rate of 28.6%. One of the nine patients who had no recognizable reason for decreased immunity died, a mortality rate of 11.1%. Both patients who presented with massive degloving injuries died, resulting in a 100% mortality rate. Finally, one of the four patients with end stage renal disease died, a mortality rate of 25%.

Seven of the eight mortalities resulted for septic shock with the other death attributed to a pulmonary embolus. All nonsurvivors had mixed infections, the most common organisms being streptococcus, staphylococcus, and *E.coli*. All were treated with broad-spectrum antibiotic coverage and debridement at least one time.

The most significant difference between survivors and nonsurvivors appears to be the extent of illness upon presentation. Four of the eight patients who died presented with a mean blood pressure of 92/palpable, indicating that generalized sepsis was present by the time of admission. Apparently age was not as important as immune status or extent of illness as a predictor of survival, with the mean age of nonsurvivors being approximately ten years less than that of survivors.

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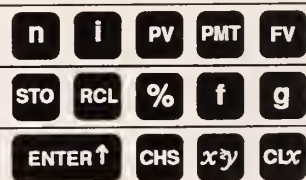
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# Construction of an Electrode for Intraoperative Nerve Stimulation

RA ASHLEY, BS  
AS WEE, MD  
Jackson, Mississippi

**D**uring a neurosurgical procedure, an electrophysiologic study may sometimes be necessary to identify, assess, and monitor the nerve function, and electrical stimulation of a nerve structure may be required.<sup>1-3</sup> This report describes a simple method of construction a stimulating electrode for intraoperative use.

## Materials for Construction

The barrel of the stimulating electrode consists of a 15-cm long stainless-steel tube with a 0.42-cm inside diameter and a wall thickness of 0.038 cm. Other lengths may be utilized if desired.

The electrode's conduction cable is commercially available and fits standard needle electromyographic (EMG) electrodes; it is usually 65 cm or more in length. One end of the electrical cable has a standard-sized pin conductor that plugs into a jack-box during recording. The other end has a receptacle designed to accept the base of a disposable needle EMG electrode. This receptacle is surrounded by a rubbery material, and its overall diameter is smaller than the inner diameter of the stainless-steel tube.

A general-purpose heat-shrink tubing with a diameter of 0.48 cm that reduces to 0.24 cm upon heating is utilized to secure the cable to both ends of the barrel.

The stimulating portion of tip of the electrode is made from a 20-gauge silver wire.

## Electrode Construction

The ends of the stainless-steel tube are beveled on a fine-grade grinder to remove sharp edges and are the polished on a buffing wheel for a smooth finish. Any residues inside the tube should be removed. The tube is cleansed with antiseptic solution and dried with a compressed air gun. The receptacle portion of the

The electrode described in this paper consist of a barrel or handle with its conducting cable and a detachable stimulating tip. It is constructed of inexpensive and commercially available materials and is disposable. During the course of a stimulation study, electrode tips of different lengths or curvatures may be substituted without the need to replace the electrode barrel and cable.

conducting cable is threaded through one end of the tube or barrel until it protrudes about half its length out of the other end. To secure the cable within the barrel, heat-shrink material is used. During the heat-shrink process, it is important that the heat-shrink tubing contracts tightly and evenly over the barrel and the protruding receptacle of the cable. Red- or black-colored heat-shrink tubing may be utilized to indicate the polarity (anode or cathode) of each stimulating electrode.

The stimulating tip of the electrode is fashioned from a 20-gauge silver wire. One end of the wire is rotated in the flame of a blow torch until it begins to melt and forms a smooth hemispherical ball. Any carbon residue deposited on the wire may be removed by brushing the tip with a fine steel wool. The wire may be cut to whatever length is desired. The curvature of the electrode's stimulating tip depends on the purpose of the electrophysiologic study (see Figure 1). The tip can range from one which is straight to one with a narrow curve. This customized stimulating tip should fit tightly into the receptacle of the cable located on one end of the electrode barrel. The



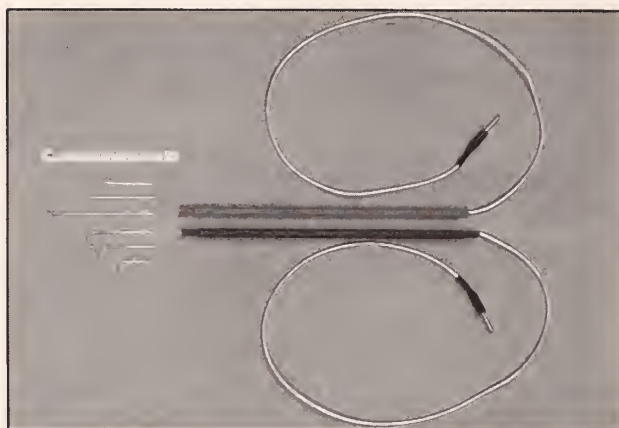


Figure 1. The stimulating electrode is composed of a barrel with an attached conducting cable and a stimulating tip that is detachable. Heat-shrink tubing covers and secures the barrel and small portions of the cable. The color of the heat-shrink material (red or black) indicates the polarity (anode or cathode) of the electrode. Stimulating electrode tips of different lengths and curvatures are shown. During stimulating, the electrodes (anode and cathode) may be held separately in both hands; of the two barrels may be joined together by an adhesive tape and the device held in one hand.

pin connector of the cable should fit into the output jack of the stimulus-isolation unit that delivers the electrical current.

The electrode barrels, with their attached cables and stimulating electrode tips, are cleansed with anti-septic solution, packed separately, and gas-sterilized with ethylene oxide.

#### Comment

This electrode may be used for electrical stimulation of a peripheral nerve as well as cranial nerve (e.g. facial). During stimulation, the cathodal and anodal electrodes may be held separately. For close bipolar type of stimulation and for convenience, two electrodes may be joined together with an adhesive tape, and the whole device can be held in one hand. One advantage of this type of electrode is that the stimulating tips are customized according to individual needs. In addition, the electrode tips are interchangeable and can be substituted during the course of the study utilizing the same electrode barrels and cables.

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## The President's Page

JAMES C. WAITES, MD

### What's In A Name

I grew up in Waynesboro, Mississippi. My parents were both school teachers, mom in music, and dad a math teacher and coach. While not being rich in the worldly sense, we children were taught a sense of responsibility and pride in our name and family. My dad constantly reminded me that "a man has two things, his name and his credit, don't disgrace either". Admittedly, I did not dwell much on what he was saying at that time, but as I have grown older, these thoughts take on a different meaning. For instance, which of us would not readily admit that while our children were teenagers, they did not cause anxiety and concern about what their actions might be, and how it would impact on our "family name". How many of us as business men and women have not had some bad feelings about the people who "use" us but do not pay us. Things look different today than it did as a youngster growing up. Words and sayings look and sound different. In regard to this, I have a pet peeve. I am a **physician**. I am not a **provider**. I have as a business, people; and as a profession, medicine.

Now let me expound on what I mean. Each of us realizes, since the advent of medicare and bureaucracy, that we have taken on a different role. We have come to be known as providers of medical care. In that same category are many other people, most of whom are honorable and honest, but we are all lumped in the category together. The dictionary defines a physician as "a doctor of medicine, one who has successfully completed a course of study in an accredited school of medicine, followed by an internship and oftentimes further examination by some governmental or other official authority preliminary to the granting of a license to engage in the practice of medicine". That's what I am.

The dictionary defines a provider as a "person who provides, furnishes or supplies, to serve, arrange, cater, deliver, dish out, dispense, feed; to supply, outfit, clothe, fit, furnish; to maintain, assist, keep up, support; to favor, accommodate, help, oblige, please; to give, present, accord, award, bequeath, bestow, concede, confer, contribute, deliver, devote, endow, extend, fund, give away, hand out." In these definitions I find many things that I do, such as providing good clean jobs for my staff; arranging call schedules to be available; catering to the whims of some

*(Continued on page 271)*



## Reforming Medicare Payments: The RBRVS

Transition to the new Medicare Payment System, based on the newly developed Resource-Based Relative Value Scale (RBRVS), is scheduled to begin in January 1992. For approximately 10 years, efforts have been underway to reform physician payments under the Medicare system. The RBRVS was developed by Harvard University at the request and support of HCFA. This system is to replace the "customary, prevailing and reasonable" payment system currently in use. The OBRA '89 Act specifically outlined the method of transferring to the new system, prohibited specialty differential payments, established a Medicare volume performance scale, required budget neutrality in health care disbursements, imposed strict limits on balanced billing, and made changes that adjusted for geographical payment differences.

Under this new system, a conversion factor was to be used to assist the transition from the "customary, prevailing and reasonable" payment system to the new RBRVS-based system and this conversion factor was to be budget neutral; the new system expenditures would be the same as if the old CPR system had been continued. As proposed RBRVS was not to be a budget cutting device.

Now HCFA wants to impose further adjustments to the conversion factor, severely altering payments under the RBRVS to begin in January 1992. This new alteration is based on the assumption, by HCFA, that physicians will automatically increase the volume of services rendered to make up for any cuts imposed by the new system. To compensate for any expected increase in volume, HCFA has proposed alterations in the conversion factor to reduce expenditures. A 16% reduction in the Medicare conversion factor is now scheduled for implementation in January 1992.

In this act, HCFA is charging all physicians with padding volume to compensate for decreased fees, a fact not supported by prior HCFA studies. Not only are physicians being charged for committing such an act, they are being tried and punishment rendered before any such act occurs. Such action by HCFA tells us we are going to do improper things in the future and, therefore, we will punish you now. This only highlights the problems and sensitizes all practitioners who attempt to render good medical care in an appropriate manor to feel improperly accused and punished and, therefore, drives them to consider joining the few physicians who outright abuse the system. This punishment in no way selects out the real abusers but renders an across the board punishment for what a few may be doing. It seems more appropriate to select out the abusers for correction, than have HCFA abuse all physicians.

It is important that we all act now by contacting our congressional representatives and let them know that medicine supported a payment based on assurances from Congress, that it would be implemented on a fair basis, that the 16% conversion factor goes far beyond the budget neutral state mandated in the law, and that imposing such punitive measures before any occurrences will lead to a reduction in medical services rendered to the citizens, particularly threatening the elderly recipients of medical care. Individual physicians need to act now by contracting their Senators and Representatives regarding this matter.

Myron W. Lockey, MD  
Editor



# Letters

**To J. Elmer Nix, MD**

I would like to express my sincere appreciation for the recent brochure that you put out to all members of the Mississippi State Medical Association.

Your support and suggestions of voluntary "fair share" approach to taking care of Medicaid patients certainly makes a lot of sense, and I am certain that the membership will pay attention to it.

We sincerely appreciate the support that State Medical has given Medicaid, and specifically thank you for your support.

Sincerely,

**Wilfred Q. Cole, MD**  
Physician Consultant  
Division of Medicaid  
Office of the Governor

June 3, 1991

**To the Editors Journal MSMA:**

Today is the funeral for Thomas Lawrence Stennis II. He is being buried by his loving and stricken family who cannot yet reckon the extent of their loss.

I, likewise, cannot reckon the extent of my own loss, for the honorable Tom Stennis, Attorney-at-Law, was the best friend that I or any Mississippi Doctor ever had.

For, you see, Tom Stennis was a lawyer who loved both the law and the healing arts. So, with these loves as his base and with a passionate devotion to truth and justice he built a career.

And the career was brilliant ...

And the career was incomparable ...

And the career was all too short ...

And I will sorely miss him ... and so will you, my brothers.

Mark you well his passage from us ... we shall not likely be blessed in our lifetime with such a staunch advocate as was Tom Stennis, lawyer.

Felt in Deepest Respect by a Physician.

**R. H. Stewart, MD**  
Pass Christian, Mississippi

**To the Editors Journal MSMA:**

We have just completed the AMA Annual Convention in Chicago and this is a brief report of what went on.

Mississippi has much to be proud of. Our entire delegation of AMA delegates, alternates and guest served us well. We have in national leadership positions: Nancy Lindstrom with Auxiliary AMA-ERF; Dr. Ed Hill on the Council on Legislation; Dr. George McGee on the Council of Long Range Planning; Dr. Carl Evers was elected to the Council on Medical Education; Dr. Faser Triplett, Chairman of AMPAC; Dr. Sidney Graves who has been elevated to Chairman of the Southeastern Coalition; and Mr. Charlie Mathews, our Executive Director, on the Board of State Executives.

While this must seem self serving, let me assure you that this represents respect for Mississippi and its delegation, which has been going to the AMA and making an impact. We have long stressed the fact that we may be a small State, but we have good people, good doctors, and we practice good medicine, and I think it is beginning to come to the forefront.

Also, I would like to acknowledge and thank many other people who contributed so much to the success of this recent meeting. Mr. Bill Roberts for his knowledge of the AMA and his drive to get things done and showing us that we can accomplish much on a shoestring. To Barbara Shelton for her work with the Auxiliary and seeing that they had what they needed, when they needed it to accomplish their goals. To Ginger Cocke with her smiling face and camera recording things when we needed it recorded. We would also like to acknowledge the work the Auxiliary did on our behalf as an AMA delegation. They were always there, always shaking hands, always pinning Carl Evers' stickers on somebody, and always asking for the vote. We have much to be thankful for with our Auxiliary who has worked so closely with us under the leadership of Sylvia Walker and Merrell Rogers.

I would also like to thank Lee Rogers, David Clipping, John Paul Lee, Stanley Wade and Don Mitchell, from the Board of Trustees of State Medical for their coming to the meeting and being such a vital part of the delegation, coming to our meetings even though they started early in the morning and helping our election process. Thanks to Dr. Jim Barnett and his wife Roberta who represented Southern Medical Association and to Dr. Vann Craig and Dr. Jim McIlwain who represented the MS Foundation for Medical Care. Dr. McIlwain is Medical Director of our PRO. He was much help to us in pointing out things about



the PRO, but perhaps had a learning process himself of what actually went on at the AMA meetings. Our two medical students were always out "pressing the flesh", asking people for their vote, asking for help in the election process of Carl Evers. I would like to express appreciation to the entire Mississippi delegation, delegates and alternates, for their willingness to give up their little free time to "politic" for Carl. All of this could not have been accomplished without you, the practicing physician back in Mississippi, supporting the efforts of the AMA delegation.

I know that we are not always totally happy with what occurs in the AMA, we are not always totally satisfied with what occurs, and certainly we came away from this meeting both thrilled about our ability to get Carl elected, but also discouraged about what is happening to us as physicians on the National level. You have received a letter from the State Office regarding the proposed rule making of HCFA, which arbitrarily has decided on a 16% cut in our Medicare reimbursement. This will effect all of us and I cannot stress it too much, ALL OF US, both members, non-members, any practicing physician in this country is going to be effected by this proposed rule. If you have not already made your phone calls, please do so. Please call your Congressman, please write letters to your Congressman, encourage your fellow physicians in your community to write these letters and let's just inundate them with both phone calls and letters letting them know of our displeasure in this proposed rule making and how arbitrary we think HCFA is in what they have done.

Certainly, not everything is rosy, but things certainly look better for us as physicians, as long as we are physicians. Let us always remember that we practice good medicine. We give caring medicine and we

will hold up our end of the bargain, no matter what the FEDS try to do to us.

James C. Waites, MD

## Presidents's Page

(Continued from page 268)

people; dishing out samples to those who cannot afford to buy their medicine; assisting my patients in obtaining quality and appropriate health care; keeping up medical records; accommodating insurance companies; contributing to multiple charities; giving away services to those who cannot afford it; and even providing a hand out now and then. So then am I a provider? Technically I suppose that sometimes I do fit the definition, but being a physician implies so much more.

In a recent letter to the editor of *AMNews*, Roderick T. Beaman, DO of Providence RI proposed an interesting analogy. He compared sex and love to care and treatment. As a prostitute sells sex as a substitute for love, so today we see treatment being sold as a substitute for caring. Love and care cannot be sold while treatment and sex can be. Love and care are intangibles, while sex and treatment are palpable.

I concur with physician Dr. Beaman. As a provider I might offer treatment, but as a physician I offer caring. I AM A PHYSICIAN, I am not a provider as it is being used in today's jargon. I hope you agree with this stand and will join me in standing up for our rightful title.

As my friend Joe Johnston always says "Thank God I am a physician", and I would add "God give me the wisdom to know and understand the difference".

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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **Opinions On Social Policy Issues**

### **Unnecessary Services**

Physicians should not provide, prescribe, or seek compensation for services that are known to be unnecessary or worthless.

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### **Withholding Or Withdrawing Life-Prolonging Medical Treatment**

The social commitment of the physician is to sustain life and relieve suffering. Where the performance of one duty conflicts with the other, the preferences of the patient should prevail. If the patient is incompetent to act in his own behalf and did not previously indicate his preferences, the family or other surrogate decisionmaker, in concert with the physician, must act in the best interest of the patient.

For humane reasons, with informed consent, a physician may do what is medically necessary to alleviate severe pain, or cease or omit treatment to permit a terminally ill patient to die when death is imminent. However, the physician should not intentionally cause death. In deciding whether the administration of potentially life-prolonging medical treatment is in the best interest of the patient who is incompetent to act in his own behalf, the surrogate decisionmaker and physician should consider several factors, including: the possibility for extending life under humane and comfortable conditions; the patient's values about life and the way it should be lived; and the patient's attitudes toward sickness, suffering, medical procedures, and death.

Even if death is not imminent but a patient is beyond doubt permanently unconscious, and there are adequate safeguards to confirm the accuracy of the diagnosis, it is not unethical to discontinue all means

of life-prolonging medical treatment.

Life-prolonging medical treatment includes medication and artificially or technologically supplied respiration, nutrition or hydration. In treating a terminally ill or permanently unconscious patient, the dignity of the patient should be maintained at all times.

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### **Withholding Or Withdrawing Life-Prolonging Medical Treatment-Patients' Preferences.**

A competent, adult patient may, in advance, formulate and provide a valid consent to the withholding or withdrawal of life-support systems in the event that injury or illness renders that individual incompetent to make such a decision. The preference of the individual should prevail when determining whether extraordinary life-prolonging measures should be undertaken in the event of terminal illness. Unless it is clearly established that the patient is terminally ill or permanently unconscious, a physician should not be deterred from appropriately aggressive treatment of a patient.

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# Medical Organization

## Dr. Robert S. Rhodes Receives Fellowship

Dr. Robert S. Rhodes, professor of surgery and chairman of the department at the University of Mississippi Medical Center, is among six recipients of the Robert Wood Johnson Foundation's Program for Faculty Fellowships in Health Care Finance for 1991.

The fellowship program is open to faculty in graduate programs with a health finance and policy focus where health care financing is an integral component of the department's teaching and research. Fellows are selected according to past academic and other professional achievements and their potential for growth and leadership in the academic world.

The 30-month fellowship addresses the growing demand for faculty with competence in health care finance. It is designed to create a group of faculty who not only can teach and do research, but also can serve as leaders in their own institutions and throughout the academic world to improve both the curricula and knowledge of today's increasingly complex health care financing policy.

## Dr. Clinton Smith Receives Award

Dr. James Clinton Smith, assistant professor of preventive medicine (epidemiology) and assistant professor of pediatrics at the University of Mississippi Medical Center, is one of two selected to receive the 1991 Citizen of the Year Award from the National Association of Social Workers.

A former executive director of the Division of Medicaid, Dr. Smith was responsible for expanding categories of eligibility and increasing services available for Medicaid recipients. He also increased the number of physicians in private practice who provide services to Medicaid patients, especially among pediatricians in the state.

Representative Ed Beulow commended Dr. Smith in a statement in the Clarion-Ledger saying, "The biggest mark Dr. Smith made on the program (Medicaid) was more of a feeling of compassion in the

services rendered. He made it more of a human program than a governmental program."

## Mississippi Lung Association Holds 78th annual meeting.

The 78th annual meeting of the Mississippi Lung Association was held recently in Jackson. Newly elected officers of the MLA Board of Directors include Charles J. Parkman, MD of Hattiesburg, president and Roland B. Robertson, Jr., MD of Jackson 2nd vice-president. On the national level G. Boyd Shaw, MD of Jackson is currently Mississippi Lung Association's Representative to the American Lung Association Board of Directors and Dr. Parkman is the Mississippi Thoracic Society's Representative Councilor to the American Thoracic Society.



*Charles J. Parkman, MD, left, Hattiesburg, president; Guy D. Campbell, MD, Jackson and G. Boyd Shaw, MD, Jackson.*

*Below, other physicians continuing to actively serve on the MLA Board of Directors include; Antone W. Tannehill, Jr., MD, of Tupelo, left; Clyde A. Watkins, MD, center, and Roland B. Robertson, MD, right, both of Jackson. Also serving is Alton B. Cobb, MD of Jackson, not shown.*





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# From the University of Mississippi Medical Center

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## John B. O'Connell, MD Joins UMC

Dr. John B. O'Connell has been named professor of medicine and chairman of the department in the School of Medicine at the University of Mississippi Medical Center.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs announced his appointment following approval by the Board of Trustees of State Institutions of Higher Learning.

"Dr. O'Connell is a distinguished cardiologist who brings exceptional credentials in academic medicine to the Medical Center," Dr. Nelson said. "We are pleased to have a physician of his caliber join us in this important role."

Dr. O'Connell's appointment is effective June 15, 1991. Dr. O'Connell, who had been associate professor of medicine at the University of Utah School of Medicine since 1986, is a 1971 graduate of the University of Illinois. He earned the MD in 1974 at the Loyola University Stritch School of Medicine.

Dr. O'Connell took his internship and was chief resident in internal medicine at Loyola University Medical Center. He also completed a fellowship in cardiology there in 1980, joined the medical staff and was appointed assistant professor of medicine at Loyola Stritch School of Medicine. He was promoted to associate professor of medicine in 1985.

Dr. O'Connell was an assistant chief of the medical service at Hines Veterans Administration Hospital in Hines, IL from 1981-1983, and was named medical director of the cardiac transplantation program at Loyola University Medical Center in 1984.

In 1986, Dr. O'Connell was named medical director and chairman of the executive committee for the Utah Cardiac Transplant Program. He also held medical staff appointments at the University of Utah Medical Center and LDS Hospital in Salt Lake City before coming to Mississippi.

Dr. O'Connell is president elect of the Interna-

tional Society for Heart Transplantation and chairs the Cardiac Transplantation Committee of the American Heart Association. He is a member of the Scientific Council of Cardiomyopathies for the International Society and Federation of Cardiology, former chairman of the Experimental Organ Transplantation Procedures Advisory Board for the State of Illinois and member of the board of directors of the Intermountain Organ Recovery System.

A fellow of the American College of Cardiology, the American College of Physicians, American College of Chest Physicians and the American Heart Association, Dr. O'Connell holds professional memberships in the American Association for the Advancement of Sciences, International Society for Heart Transplantation, American Federation for Clinical Research and the American Society of Transplant Physicians.

He is author or coauthor of more than 200 scientific publications, including some 18 book chapters, and serves on the editorial board of the Journal of Heart Transplantation and as consultant to 10 medical journals.

## Edward G. Vick, Sr., MD Appointed Assistant Professor of Surgery at UMC

Dr. Edward G. Vick, Sr., of Ridgeland has been appointed assistant professor of surgery (otolaryngology) in the School of Medicine at the University of Mississippi Medical Center.

His appointment was announced by Dr. Norman C. Nelson, UMC vice chancellor for health affairs and medical school dean, following approval by the Board of Trustees of State Institutions of Higher Learning.

Dr. Vick had been in private practice in Memphis, TN, since 1982.

Dr. Vick earned the MD in 1974 at the University of Tennessee Center for the Health Sciences (UTCHS). He took his internship and residency in general surgery at the Methodist Central Hospital in Memphis, followed by a residency in otolaryngology at UTCHS, where he was instructor in otolaryngology. He took a fellowship in facial plastic and reconstructive surgery in Tampa, Florida.



## Faculty Promotions Announced at UMC

Thirty-two have been named in faculty promotions in the Schools of Medicine, Nursing, Health Related Professions and Dentistry and centerwide at the University of Mississippi Medical Center effective July 1.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the promotions following approval by the Board of Trustees of State Institutions of Higher Learning.

In the School of Medicine, promotions to the rank of professor included Dr. Donald E. Butkus, professor of medicine; Dr. Carol Scott-Conner, professor of surgery; Dr. Bryan D. Cowan and Dr. Rodney G. Meeks, professors of obstetrics and gynecology; and Dr. Ramesh B. Patel, professor of radiology.

Promoted to the rank of associate professor in the medical school were Dr. Gregory H. Blake, associate professor of family medicine; Dr. Frederick B. Carlton, Dr. Gilliam S. Hicks, Dr. James C. Kolb, Dr. J. Keith Mansel, and Dr. Helen R. Turner, associate professors of medicine; Dr. Judith A. Lyons and Dr. Donald B. Penzien, associate professors of psychiatry and human behavior (psychology); and Dr. E. Taliaferro Warren, associate professor of surgery. Promoted to assistant professor were Dr. Rebecca Waterer, assistant professor of medicine, Dr. Bonnie Woodall and assistant professor of pediatrics.

Centerwide promotions included Dr. Gregory a Mihailoff, professor of anatomy; Dr. Jerry M. Farley, professor of pharmacology and toxicology; Dr. Robert E. Lewis, Jr. professor of pathology; Dr. Junius G. Adams III, associate professor of biochemistry; Dr. Albert Chan, associate professor of pharmacology and toxicology; Dr. Paul J. May, associate professor of



*MMA Represented at UMC Commencement - William Akins Thomas, Jr., of Long Beach, center, and David John Parham Sauls of Clinton, center right, 1991 graduates of the University of Mississippi School of Medicine at the Medical Center in Jackson, are, respectively, the Virginia Stancil Tobert award winner and student delegate to the Mississippi State Medical Association Annual Meeting. Dr. Carl Evers, center left, is medical school associate dean for academic affairs and Mississippi delegate to the AMA. Dr. R. Gerald Turner, right, is University of Mississippi Chancellor; and Dr. Norman C. Nelson, left, is UMC vice chancellor.*



physiology and biophysics.

In the School of Nursing, Dr. Rene M. Reeb was promoted to the rank of professor of nursing. Rosie L. Calvin was promoted to assistant professor of nursing.

School of Health Related Professions promotions included Thomas B. Wiggers, associate professor of medical technology; Delores K. Goldmeyer, assistant professor of health record administration and Libby Spence, assistant professor of medical technology.

School of Dentistry promotions included Dr. J. Perry McGinnis, Jr., professor of diagnostic sciences and associate dean for academic programs; Dr. Harold Kolodney, Jr., professor of restorative dentistry; and Dr. Dewey F. Myers and Dr. Carroll W. Dew, associate professors of restorative dentistry.

Dr. Butkus came to the Medical Center in 1987 from the Uniformed Services University of the Health Sciences, where he was associate professor of medicine. He earned the MD at The Albany Medical College of Union University, and took his internship at Brooke General Hospital in San Antonio, TX. He took his residency at Madigan General Hospital in Tacoma, Washington, and completed a fellowship in nephrology at the University of Colorado Medical Center in 1972.

Dr. Scott-Conner came to the Medical Center faculty in 1986 from Marshall University School of Medicine, where she was associate professor of surgery. She earned the MD in 1976 at New York University Medical Center, where she took her residency and was chief resident and clinical instructor in surgery. She earned the PhD in 1988 at the University of Kentucky.

Dr. Cown was instructor in obstetrics and gynecology at the Uniformed Services University of the Health Sciences and head of the Division of Reproductive Endocrinology at the National Naval Medical Center in Bethesda, MD before coming to the Medical Center as assistant professor of obstetrics and gynecology and director of the in vitro fertilization program in 1983. He was promoted to associate professor and director of the Division of Reproductive Endocrinology in 1986. He earned the MD at the University of Colorado and took his internship and residency at Portsmouth Naval Hospital in Portsmouth, VA. He completed a fellowship in reproductive endocrinology at the National Institute of Child Health and Human Development, National Institutes of Health in 1981.

Dr. Meeks, who earned the MD in 1974 at the

Medical Center, joined the faculty in 1978 as instructor in obstetrics and gynecology after completing his internship and residency at the University of Rochester. He rose through the ranks to assistant professor in 1980, associate professor in 1984, and director of gynecology in 1986.

Dr. Patel was appointed assistant professor of radiology in 1981 and was promoted to associate professor in 1984. He also has been coordinator of radiologic education and director of the Division of Diagnostic Imaging since 1982. He came to the Medical Center from St. Louis University, where he was assistant professor of radiology and director of the Department of Radiology at John Cochrane Veterans Administration Hospital in St. Louis, MO. He earned his medical degree in 1967 at the University of Baroda, and took his internship and residency there at the Medical School Hospital. He also took an internship at the South Baltimore General Hospital in Baltimore, MD, and residencies at the Elyria Memorial Hospital in Elyria, Ohio and at the University of Virginia Medical Center in Charlottesville, VA, where he was chief resident in radiology. He also took training in radiation therapy at the Case Western Reserve University Hospital in Cleveland, Ohio.

Dr. Blake, who joined the faculty as assistant professor of family medicine in 1989, earned the MD in 1977 at the University of Texas Health Science Center Southwestern Medical School and the master's of public health, biostatistics and epidemiology in 1989 at the University of Oklahoma Health Sciences Center, where he had been assistant professor of family medicine since 1984. He took his internship and residency at the Dwight David Eisenhower Army Medical Center at Fort Gordon, GA, followed by a fellowship at the University of North Carolina at Chapel Hill.

Dr. Carlton was a member of the emergency medicine staff at Mercy Regional Hospital in Vicksburg before coming to the Medical Center in 1985 as assistant professor. He earned the MD in 1980 at the Medical Center, where he also took his internship and residency.

Dr. Hicks earned the MD in 1975 at the Medical Center and took his residency there and at the Department of Veterans Affairs Medical Center. He was appointed instructor in medicine in 1978 and promoted to assistant professor in 1979. He is also acting assistant chief of the medical service, director of the diabetes clinic and director of medical student education at the Department of Veterans Affairs Medi-



cal Center.

Dr. Kolb earned the MD in 1981 at the Medical Center. He took his internship at the University of Texas Health Science Center at San Antonio, TX, followed by a residency at the Medical Center. He was appointed assistant professor of medicine at the Medical Center in 1984.

Dr. Mansel was appointed assistant professor of medicine and assistant director of respiratory therapy in 1987, and assistant professor of anesthesiology in 1988. He earned the MD in 1979 at the Medical Center and took his internship, residency and a fellowship at the Mayo Graduate School of Medicine.

Dr. Turner earned the MD in 1979 at the Medical Center, where she also took her internship, residency and a fellowship. She was appointed assistant professor of medicine in 1984, and presently is associate chief of staff for education and acting chief of medicine at the Department of Veterans Affairs Medical Center.

Dr. Lyons was appointed assistant professor of psychiatry and human behavior (psychology) in 1987. She earned the PhD in 1985 at Concordia University in Montreal, Quebec and took internships in clinical psychology at the Montreal General Hospital, the University of Mississippi Medical Center and the Department of Veterans Affairs Medical Center, where she is presently director of the Mental Health Liaison.

Dr. Penzien earned the PhD in 1986 at Ohio University. He took a clinical internship at Brown University. He was appointed to the Medical Center faculty as assistant professor of psychiatry and human behavior in 1986, and is now director for the UMC headache and pain clinics and the behavioral medicine consultation service.

Dr. Warren earned the MD in 1976 at the Medical Center, where he took his internship and residency and was chief resident in surgery. He took a cardiothoracic surgery residency at the Medical University of South Carolina prior to his appointment to the UMC faculty in 1984 as assistant professor of surgery and assistant chief of cardio-thoracic surgery.

Dr. Waterer earned the MD in 1985 at the Medical Center, where she took her internship and residency. She was appointed instructor in medicine in 1990.

Dr. Woodall earned the MD in 1985 at the Medical Center and took her internship at Vanderbilt University and residency at Vanderbilt University and

UMC, where she was chief resident in pediatrics. She was appointed instructor in pediatrics in 1988.

Dr. Mihailoff was appointed associate professor of anatomy in 1990. He had been on the faculty at the University of Texas Southwestern Medical Center at Dallas since 1974, and was associate professor of cell biology and associate professor of neurology before his Medical Center appointment. He earned the PhD in 1974 at Ohio State University before joining the UTSMC faculty.

Dr. Farley was appointed assistant professor of pharmacology and toxicology in 1980 and promoted to associate professor in 1984. He earned the PhD in 1976 at West Virginia University. He took his postdoctoral training and was a research associate at Northwestern University in Chicago before coming to the Medical Center.

Dr. Lewis earned the PhD in 1976 at the Medical Center and took postgraduate training at Barnes Hospital in St. Louis, MO, the University of Miami Medical Center, University of Tennessee for Health Sciences at Memphis, City of Memphis Hospitals and St. Jude Children's Research Hospital in Memphis. He was appointed to the Medical Center faculty in 1976 as instructor in pathology and instructor in anesthesiology, and was promoted to assistant professor of pathology and anesthesiology in 1977, and associate professor of pathology in 1984. He is presently co-director of clinical immunology.

Dr. Adams was appointed associate professor of medicine and assistant professor of preventive medicine in 1976 and assistant professor of biochemistry in 1980. He was promoted to associate professor of preventive medicine in 1983 and professor of medicine in 1987. He earned the PhD in 1971 at the University of Michigan, then joined the faculty at the University of Illinois, where he was assistant professor of genetics and assistant professor of genetics in medicine before coming to the Medical Center.

Dr. Chan earned the PhD in 1980 at the University of Nebraska Medical Center and took postdoctoral training at the University of Texas in Dallas. He was appointed assistant professor of pharmacology and toxicology at the Medical Center in 1983.

Dr. May was appointed assistant professor of anatomy and instructor in ophthalmology in 1986. He earned his PhD in 1983 at Duke University. He was instructor in physiology and biophysics at New York University Medical Center prior to coming to Mississippi.



Dr. Brands earned the PhD in 1988 at the University of Missouri. He was a research associate in Physiology and biophysics at the Medical Center prior to his faculty appointment.



*Medical Student of the Year at UMC - Medical student Anson Lee Thaggard, left, of Philadelphia, was recognized during the 30th annual honors day ceremonies of the School of Medicine and graduate programs at the University of Mississippi Medical Center. Thaggard, the son of Mr. and Mrs. Aubrey R. Thaggard, was voted Medical Student of the Year by his classmates, received the Robert D. Sloan award for outstanding achievement in radiology, was named the outstanding senior student in family medicine, and received the Department of Surgery Prize. He was also recognized as recipient of an F.A. Hunt scholarship. The University of Mississippi Medical Alumni Chapter sponsors the Medical Student of the Year Award in recognition of those qualities most desired in a physician. Dr. Norman C. Nelson, right, is UMC vice chancellor and dean of the School of Medicine.*

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## New Members

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**Argo, Robert Q., Jr.**, Greenville. Born Clarksdale, MS, September 5, 1951; MD University of Tennessee College of Medicine, Memphis, TN 1977; interned and internal medicine residency, Baptist Hospital, Memphis, TN, 1/78 - 12/85; elected by Delta Medical Society.

**Aron, William L., Jr.**, Greenville. Born Pontotoc, MS September 7, 1946; MD University of Mississippi School of Medicine, Jackson, MS, 1970; interned one year UMC, Jackson, MS; elected by Delta Medical Society

**Battaile, Joseph C.**, Clarksdale. Born July 27, 1934; MD University of Maryland School of Medicine, Baltimore, MD, 1961; interned South Baltimore General Hospital, Baltimore, MD, one year; psychiatry residency, same, 1962-64 and Springfield State Hospital, Sykesville, MD 1964-65; elected by Clarksdale and Six Counties Medical Society.

**Bobo, Richard H.**, Jackson. Born Clarksdale, MS, September 28, 1958; MD Tulane University School of Medicine, New Orleans, LA, 1983; interned and neurosurgery residency University Medical Center, Jackson, MS, 1983-89; elected by Central Medical Society.

**Bosco, Julius S., Jr.**, Pascagoula. Born Endicott, NY, October 29, 1960; MD West Virginia School of Osteopathic Medicine, Lewisburg, West Virginia, 1986; one year internship, Humana Hospital, West Palm Beach, FL; residency in ob-gyn, Tulane University Medical Center & Charity Hospital, New Orleans, LA 1987-91; elected by Singing River Medical Society.

**Bradley, Judith L.**, Laurel. Born Hattiesburg, MS September 3, 1960; MD University of Mississippi School of Medicine, Jackson, MS 1986; interned one year University of Arkansas Medical Sciences, Little Rock, AR; ophthalmology residency, University Medical Center, Jackson, MS, 1987-91; elected by South Mississippi Medical Society.

**Brent, Charles R.**, Hattiesburg. Born Laurel, MS, January 15, 1955; MD University of Mississippi School of Medicine, Jackson, MS 1980; interned one year University of Hawaii Medical School, Honolulu, Hawaii;

neurosurgery residency, Mayo Graduate School of Medicine, Rochester, MA, 1981-86; elected by South Mississippi Medical Society.

**Buttross, L. Susan**, Jackson. Born Canton, MS, July 2, 1951; MD University of Mississippi School of Medicine, Jackson, MS 1977; interned and one year pediatric residency, UMC, Jackson, MS 1977-79; pediatric residency, University of Texas, Galveston Branch, Galveston, TX 1980-81; elected by Central Medical Society.

**Cirilli, Gary A.**, Jackson. Born Clarksdale, MS, February 23, 1961; MD University of Mississippi School of Medicine, Jackson, MS 1987; interned and radiology residency Baylor Medical Center, Houston, TX, 1987-91; elected by Central Medical Society.

**Davis, Gary M.**, Jackson. Born Mound Bayou, MS, July 13, 1954; MD Meharry Medical College School of Medicine, Nashville, TN, 1979; interned and medicine residency Meharry Hubbard Hospital, Nashville, TN, 1979-82; nephrology residency Loma Linda University Hospital, Loma Linda, CA 1982-84; elected by Central Medical Society.

**Dial, John D.**, Parchman. Born Pilot Point, TX, January 12, 1934; MD University of Mississippi School of Medicine, Jackson, MS, 1981; elected by Delta Medical Society.

**Dobson, F. Moncreif**, Jackson. Born Rome, GA, June 16, 1952; MD Medical College of Georgia, School of Medicine, Augusta, GA, 1977; interned and pediatrics residency University of Louisville, Louisville, KY 1977-80; fellowship in neonatal/perinatal medicine 1983-85; elected by Central Medical Society.

**Dugger, David L.**, Pascagoula. Born Jackson, TN, December 26, 1944; MD University of Tennessee College of Medicine, Memphis, TN, 1968; interned and one year pediatric residency City of Memphis Hospitals, Memphis, TN, 1969-71; pediatric residency LSU and Charity Hospitals, New Orleans, LA, 1981; elected by Singing River Medical Society.

**Kennedy, J. L., Jr.**, Jackson. Born Jackson, MS, November 12, 1961; MD University of Mississippi School of Medicine, Jackson, MS, 1987; interned and anesthesiology residency Medical University of South Caro-



lina, Columbia, SC, 1987-91; elected by Central Medical Society.

**Loewenstine, Virginia, Pearl.** Born Milwaukee, WI, March 7, 1961; MD Medical College of Ohio, Cincinnati, OH, 1987; family medicine residency, St Elizabeth Medical Center, Dayton, OH, 1987-90; elected by Central Medical Society.

**Loria, Philip R., Jr.,** Oxford. Born New Orleans, LA, June 14, 1955; MD Louisiana State University School of Medicine, New Orleans, LA, 1982; interned University Medical Center, Lafayette, LA, one year; dermatology residency LSU Medical Center, New Orleans, LA, 1983-86; elected by North Mississippi Medical Society.

**Lott, Chester C., Jr.,** Starkville. Born Camp Chaffee, AK, January 22, 1956; MD University of Mississippi School of Medicine, Jackson, MS, 1983; interned and ob-gyn residency, LSU Division, Charity Hospital, New Orleans, LA, 1983-87; elected by Prairie Medical Society.

**Lou, Anna, Jackson.** Born Greenwood, MS, April 27, 1961; MD Tulane University School of Medicine, New Orleans, LA, 1987; interned and physician medicine & rehabilitation residency Emory University Medical Center, Atlanta, GA, 1987-91; elected by Central Medical Society.

**Lucas, Eric D.,** Pascagoula. Born July 31, 1961; MD Morehouse School of Medicine, Atlanta, GA, 1987; interned one year Henry Ford Hospital, Detroit, MI; emergency medicine residency Charity Hospital, New Orleans, LA, 1988-91; elected by Singing River Medical Society.

**Miskelley, Mark A.,** Born July 24, 1960; MD University of Alabama School of Medicine, Birmingham, AL, 1985; interned one year Baptist Medical Center, Birmingham, AL; elected by Clarksdale & Six Counties Medical Society.

**O'Connell, John B.,** Jackson. Born Chicago, IL, July 27, 1949; MD Loyola University Stritch School of Medicine, Maywood, IL, 1974; interned and medicine & cardiology residency, Same, 1974-80; elected by Central Medical Society.

**Perry, Kenneth G., Jr.,** Jackson. Born Oxford, MS, November 20, 1956; MD University of Mississippi School of Medicine, Jackson, MS, 1984; interned University of Arkansas Medical Center, Little Rock, AK, one year; ob-gyn residency University Medical Center, Jackson, MS, 1985-89; elected by Central Medical Society.

**Ramos, Manuel V., Jr,** Gulfport. Born Manila, Philippines, July 19, 1962; MD University of Maryland School of Medicine, Baltimore, MD, 1988; interned Franklin Square Hospital, Baltimore, MD, one year; elected by Coast Counties Medical Society.

**Sayes, R. Mark,** Jackson. Born Marksville, LA, August 14, 1962; MD Tulane University School of Medicine, New Orleans, LA, 1987; interned and medicine residency, University Medical Center, Jackson, MS, 1988-91; elected by Central Medical Society.

**Terry, Joe W., III,** Jackson. Born Canton, MS, August 26, 1958; MD University of Mississippi School of Medicine, Jackson, MS, 1987; interned and family practice residency University Medical Center, Jackson, MS, 1987-90; elected by Central Medical Society.

**Vittor, Virginia J.,** Union. Born La Mesa, CA, January 8, 1952; MD University of South Alabama School of Medicine, Mobile, AL, 1987; interned and medicine residency University of South Alabama Medical Center, Mobile, AL, 1987-90; elected by East Mississippi Medical Society.

**Wood, E. Greg, III,** Jackson. Born Jackson, MS, September 25, 1958; MD University of Mississippi School of Medicine, Jackson, MS, 1985; interned and orthopaedic residency, University Medical Center, Jackson, MS, 1985-90; fellowship spine surgery, Carolina Medical Center, Charlotte, NC, 1990-91; elected by Central Medical Society.

REINSTATED:

**Donald Faucett, MD,** Jackson

**Willie B. Lucas, MD,** Greenville



## Deaths

Criss, Ralph J., Jr., Coffeeville. Born September 3, 1908; MD University of Pennsylvania School of Medicine, Philadelphia, PA 1934; died April 4, 1991, age 82.

Ketchum, Thomas L., Ripley. Born Tippah County, MS, September 16, 1933; MD University of Mississippi School of Medicine, Jackson, MS, 1959; interned one year, U.S. Naval Hospital, San Diego, CA; died April 20, 1991, age 57.

Raines, Oney C., Jr., Pass Christian. Born November 5, 1906, St. Louis, MO; MD Baylor College of Medicine, Houston, TX, 1936; interned Methodist Hospital, Dallas, TX one year; died April 3, 1991, age 84.

### For Comments or Queries

The editors of *Journal MSMA* invite you to comment on any material that appears in or is absent from the publication. If you have a query or comment, please send it to: The Editor, *Journal MSMA*, PO Box 5229, Jackson, MD 39296-5229.

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# Asset Allocation Can Help You Structure A Successful Portfolio

## AMA Investment Advisors

Think of your investment portfolio the way a doctor would his medicine bag. Just as the doctor wouldn't want a bag full of stethoscopes, you probably won't want a portfolio composed of only one type of investment. An effective portfolio will include a variety of "instruments", each satisfying a different need.

You can work toward this goal by using asset allocation. This long-term strategy involves spreading your investments among several classes, such as stock or bond mutual funds, CDs, money market funds, annuities and other securities. Diversifying your investments can help reduce your overall risk and boost your overall return.

The right allocation will depend on your financial circumstances and goals, tolerance for risk, and time frame for investing. When any of these factors change, you should reassess the mix of assets in your portfolio.

### AS TIME GOES BY

Age has a significant influence on all the factors involved in asset allocation. Consider for example, three hypothetical situations, each involving a different stage of life.\* While these examples are not intended to provide advice for any situation, they may provide ideas to consider when evaluating your investment plan.

#### Good Beginnings.

The Schieffers\*, who are in their early 30s have no definite financial goals beyond accumulating as much wealth as they can. After purchasing shares in a money market fund as an emergency cash reserve, they decided to concentrate on long-term capital appreciation. Since their risk tolerance is high, they allocate a large percentage of their assets to an aggressive-growth mutual fund that concentrates on stocks of growth companies and to a global fund that concentrates on stocks of growth companies worldwide. To round out their portfolio, they invest the balance of their funds in shares of an income-producing bond fund.

#### Looking toward the future.

Gail and Bill Pulman\*, in their early 40s, have two children and are building a college education fund. Although they keep some assets in an aggressive-growth fund, they

allocate a larger percentage of their portfolio to a conservative growth-and-income fund to lower their overall investment risk. They earn more than the Schieffers; therefore, they maintain a larger cash reserve to match their higher salaries. Because the Pulmans are in a high tax bracket, they purchase shares in a tax-exempt municipal bond to reduce the amount of investment income they lose to taxes. They also invest in a tax-deferred annuity to help fund their retirement.

### A crucial turning point

The Martins\*, who are in their early 60s, retired early, sold their home and now travel a good deal. They would like to supplement their retirement income and safeguard their assets. They shift most of their investments to an income-producing bond fund and a mutual fund that invests in high-grade government bonds. However, they still keep a small portion of their assets invested in a growth fund as a hedge against inflation. The Martins' annuity and cash reserve complete their portfolio.

### Your Needs Come First

Of course, your assets mix will depend on more than just your age. If you're an aggressive investor, for example, you may prefer to concentrate your funds in higher-risk investments, since they offer the potential for higher returns over the long term. You may, however, want to shift assets to more conservative investments, as you near a cherished financial goal, such as buying a vacation home.

AMA INVESTMENT ADVISERS offers money market, income, and growth mutual funds that would be appropriate for your investment purposes, as well as tax-deferred annuities, and tax-free unit investment trusts. If you'd like more information about any of these investments, contact AMA Investment Advisors for more information. One of our Financial Counselors will be happy to provide a free consultation on your needs.

\* The names used are fictitious and do not represent actual persons.



## Personals

**Gene R. Barrett** of Jackson was presented the Millsaps College Distinguished ATHletic Service Award at the 1991 Millsaps All-Sports banquet. He has contributed to Millsaps athletics for seven years, and has served as the official Millsaps team physician for one year.

**John M. Beaman** of the Richton has just returned from an intensive two-day training course, "Gastroenterology Update 1991", conducted by the University of Alabama at Birmingham.

**David Bomboy**, a Hattiesburg orthopedic surgeon, recently attended an advanced microscopic lumbar discectomy workshop at St. Louis University.

**Julius Bosco, Jr.** of Pascagoula announces his association with Julius Bosco, Sr., and George Henneberger in the practice of obstetrics and gynecology.

**Robert F. Carter** of Biloxi has been named to the board of directors for the Mississippi Foundation for Medical Care, Inc.

**R. K. Caillouette** of Picayune was guest speaker at the Rotary Club of Picayune. He provided Rotarians with an update on the implementation of laser and laproscopic surgery techniques at Crosby Memorial Hospital.

**Richard Conn**, an orthopedic surgeon recently presented a paper entitled "New Techniques for Reducing the Need for Blood Transfusions at Total Joint Replacements

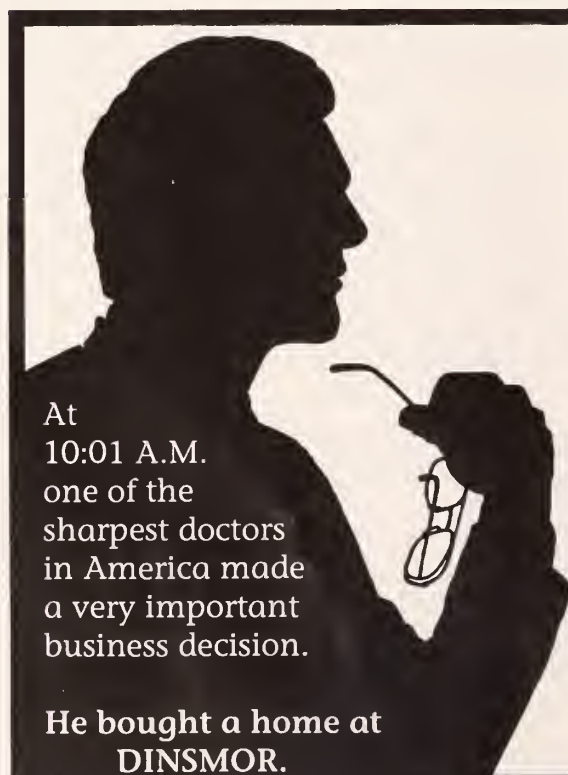
for Arthritis" at the annual meeting of the Mississippi Orthopedic Society.

**John J. Cook** of Jackson was recently elected to the board of directors of the Mississippi Foundation for Medical Care.

**Jack C. Evans** of Laurel was recently elected to the board of directors of the Mississippi Foundation for Medical Care.

**Jos W. Farina**, a neurologist, has joined the medical staff at Laird Hospital, Meridian.

**Gardner L. Fletcher** will be practicing Pulmonary Medicine at the Diagnostic Chest Clinic at 109 Millsaps Drive in Hattiesburg and at 918 Sumrall Road in Columbia. He joins Dennis M. Dale in the practice



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of Pulmonary Medicine, specializing in chest, lung, and sleep disorders.

**John Robert Ford** of Vicksburg, has completed continuing education requirements to retain membership in the American Academy of Family Physicians.

**Catherine Gleason**, a physician at Baptist Memorial Hospital - North Mississippi, conducted a seminar at the hospital entitled "Separate Fact from Fiction - Breast Cancer and Breast Self-Examination".

**Lewis E. Hatten** announces the new location of the Surgery Clinic of Wiggins to 310 Parker Street, Wiggins, MS 39577.

**Joseph C. Hillman** of Brookhaven was recently elected to the board of directors of the Mississippi Foundation for Medical Care.

**Ray Kimble** of Meridian announces his partnership with Patricia Dudley of the Psychiatric Associates, Meridian, specializing in psychiatry and addictive medicine.

**Phillip Loria** of New Orleans a board certified dermatologist has recently joined the staff at Baptist Memorial Hospital-North Mississippi, Oxford.

**Earl Mahaffey** of Sebastopol recently completed four days of advanced professional management education at the American College of Physician Executives' 1991 National Institute in Toronto, Canada.

**Keith W. McLarnan** has associated with Hattiesburg Clinic in the practice of neurology specializing in pediatric neurology with Geoffry B. Hartwig and Gregory J. Condon.

**Charles D. Miles** of Columbus announces the addition of Obstetrics to

his current practice of Gynecology and Infertility at 2500 5th Street North, Suite 4, Columbus, MS.

**John E. Mitchell** of Rolling Fork has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

**Frank J. Morgan, Jr.**, of Jackson was recently appointed by the President of the Federation of State Medical Boards, Inc., Barbara Schneidman, MD, and the Board of Directors to serve a three-year term on the Examination Board of the Federation for 1991-1994. The Examination Board succeeds the old FLEX Board. He was also appointed as a members of the Provisional Composite Committee which is responsible for the development and implementation of the new United States Medical Licensure Examination (USMLE). In April 1991 at the

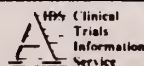
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## Personals/continued

Federation annual meeting, Dr. Morgan was elected to serve a two-year term on the Composite Committee which now has permanent status.

**George W. Moss** of Natchez announces his retirement effective July 1, 1991.

**John C. Mutziger** of Meridian was recently selected as an honored member of the Steven's Who's Who in Health and Medical Services for 1991.

**Michael R. O'Neal** announces his association with the Hattiesburg Clinic in the practice of family medicine with E. G. Duck and Stephen L. Harless at the Purvis Family Practice Clinic.

**Bernard S. Patrick** of Jackson was recently elected to the board of directors of the Mississippi Foundation for Medical Care.

**Travis Richardson** of Drew was recently elected to the board of directors of the Mississippi Foundation for Medical Care.

**Reginald D. Rigsby** of Jackson has associated with Krooss Family Doctors - Lakeland Drive for the practice of family medicine.

**Henry Sanders** of McComb is Wayne Dowdy's campaign chairman again. This time for Governor.

**Buddy Savoie** recently taught a course on examination, managements and rehabilitation of the shoulder in San Diego.

**Robert Smith** a family practice physician from Jackson recently attended a 1991 legislative workshop in Washington DC, sponsored by the Washington DC, Maryland, and Virginia Academies of Family Physicians.

**William R. Smith** of Jackson, a specialist in internal medicine and nephrology, has been elected to Fellowship in the American College of Physicians.

**Brian Stretch** of Natchez has associated with David Trim in the practice of infants, children and adolescents, 308 Highland Blvd., Natchez.

**Max R. Taylor, Jr.** of Tupelo was recently elected to

the board of directors of the Mississippi Foundation for Medical Care.

**Thad Waites** of Hattiesburg was recently elected to the board of directors of the Mississippi Foundation for Medical Care.

**Carl C. Welch** of Hattiesburg was recently elected to the board of directors of the Mississippi Foundation for Medical Care.

**C.K. "Dick" White** of Tupelo was awarded the Golden Tongue Blade Award and named Doctor of the Year by the North Mississippi Medical Center.

**Eugene Wood** a family practice physician from Jackson recently attend a 1991 legislative workshop in Washington, DC, sponsored by the Washington, DC, Maryland, and Virginia Academies of Family Physicians.



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## MISSISSIPPI STATE MEDICAL ASSOCIATION

# MSMA Membership Benefits

Representation, advocacy, public relations and support of professional ethics are some of the reasons MSMA exists for its members. These are the intangible but important benefits of membership which MSMA seeks to provide through member participation. There are also more tangible benefits which the association provides its members. Illustrated here are the MSMA-sponsored programs for such member needs as insurance and practice management support. These programs are listed below.

### HEALTH INSURANCE

MSMA members who are organized as PAs and wish to provide health insurance coverage for their employees are eligible to participate in a self-insured 501(c)(9) trust sponsored and administered by a subsidiary of the association. All MSMA members are also eligible to apply for health insurance programs offered by the American Medical Association. For further information contact Jackye Wiebelt at MSMA Diversified Services, Inc.

### MEDICAL MALPRACTICE INSURANCE

The Medical Assurance Company of MS (MACM) was sponsored and organized by MSMA in 1976 to provide a stable market for medical liability insurance to eligible members of the association. More than 1500 Mississippi physicians are currently insured by MACM and extensive physician leadership is involved in all phases of MACM's operations. For further information call MACM.

### DISABILITY INCOME INSURANCE

Based on careful evaluation of the market and periodic re-evaluation, MSMA endorses a disability income insurance program. MSMA members receive a discount and are assured of coverage by a reputable national company with a track record of writing coverage for professionals. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

### LIFE INSURANCE

MSMA members by virtue of their membership in the AMA are eligible for a variety of life insurance programs sponsored by the AMA. Because of their size these programs can be offered at low cost group rates. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

### FINANCIAL/RETIREMENT PLANNING

MSMA members by virtue of their membership in the AMA are eligible to participate in AMA Investment Advisors, Inc. This wholly owned investment subsidiary of the AMA offers a wide range of investment opportunities tailored specifically for physicians. For further information call AMA Advisers.

### PRACTICE MANAGEMENT

Through an arrangement with the AMA Department of Practice Management, MSMA periodically conducts practice management workshops for physicians' office personnel. These workshops cover a broad range of topics for CPT-IV coding to patient surveys. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

### DEBT COLLECTION SERVICE

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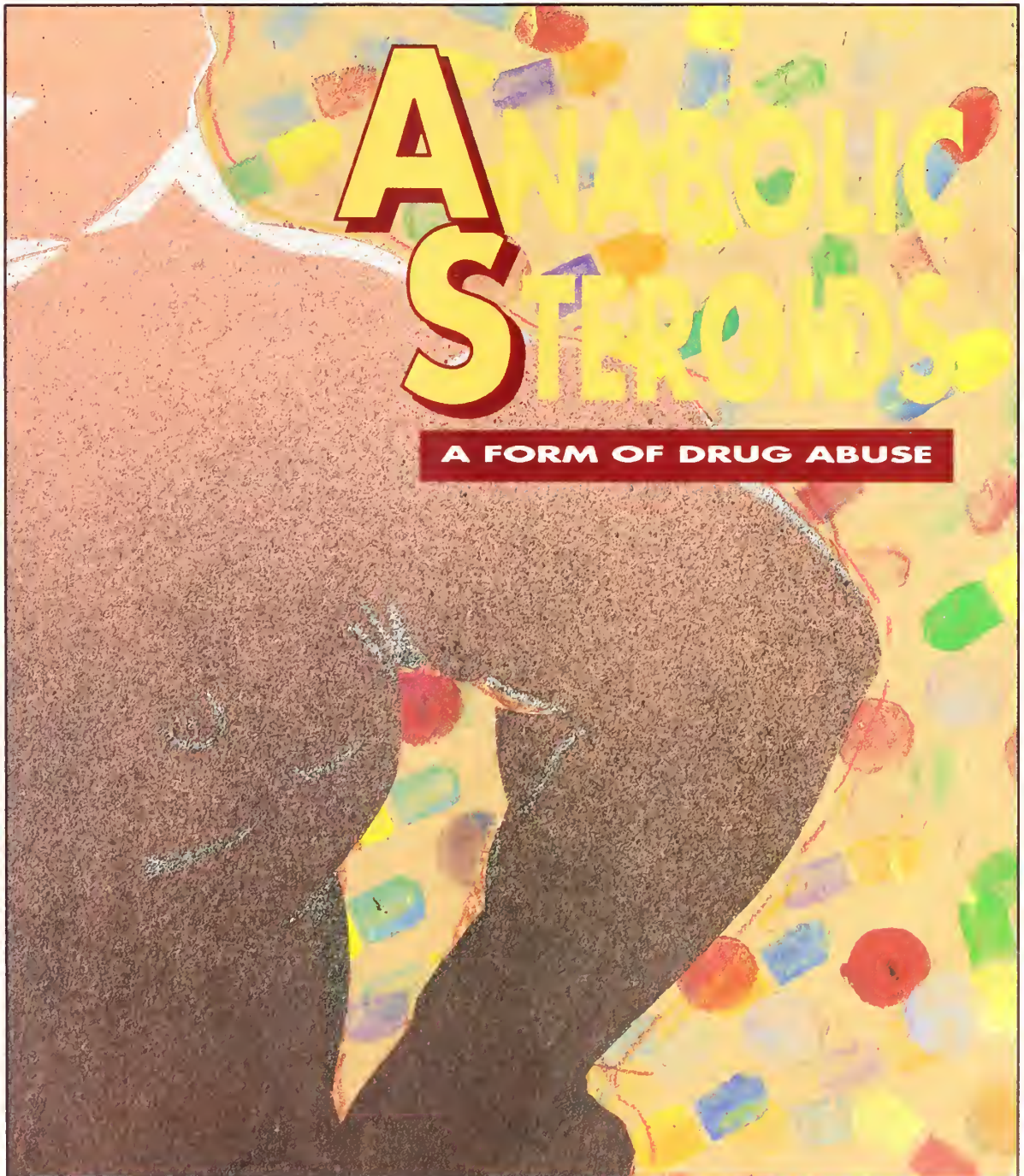


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AUGUST

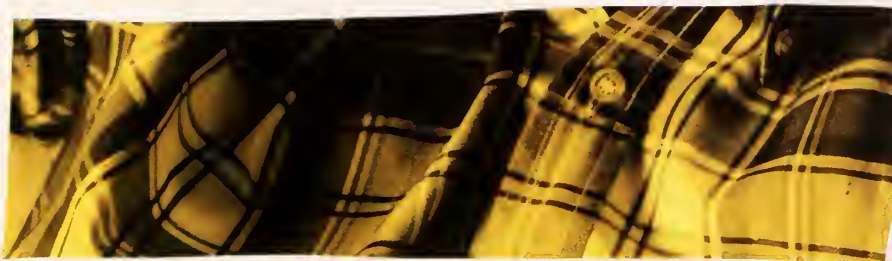
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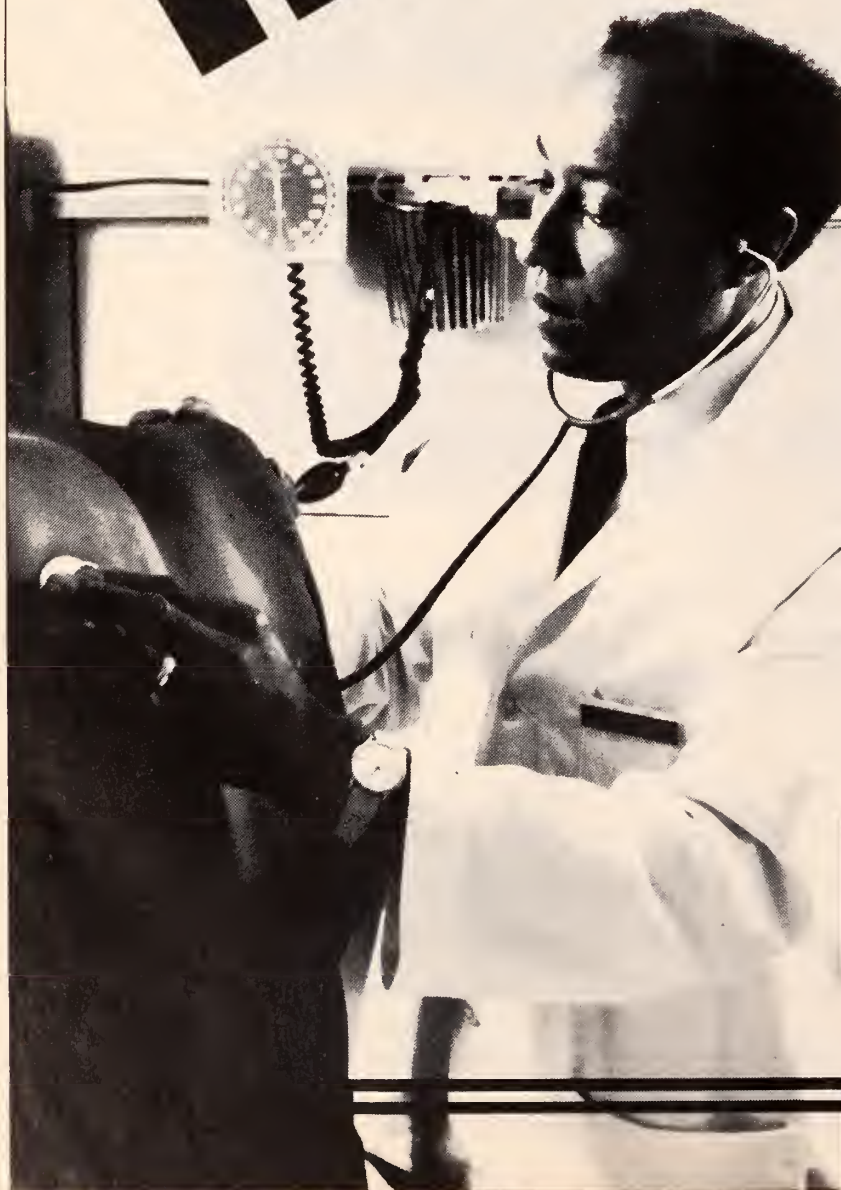
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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 8

August 1991

Dear Doctor:

This issue of your *Journal MSMA*, beginning on page 316, includes a pictorial account of our Mississippi physicians' participation in the 1991 American Medical Association Annual Meeting. Mississippi may have a small delegation numerically when compared to other states, but few states have as many of their delegates serving in leadership posts.

We all congratulate **Dr. Carl G. Evers** of Jackson on his election to the **AMA Council on Medical Education**. It is my understanding that few are elected to an AMA post the first time they are a candidate.

**Dr. George E. McGee** of Hattiesburg was appointed to the AMA Council on Long Range Planning and Development. **Dr. J. Edward Hill** of Hollandale who is currently a member of the AMA Council on Legislation, served on AMA Reference Committee F. **Dr. William C. Gates** of Columbus served on AMA Reference Committee C. **Dr. R. Faser Triplett** of Jackson is currently serving as chairman of the AMPAC Board of Directors. **Dr. Sidney O. Graves** of Natchez, assumed the chairmanship of the Southeastern States Delegation.

We also congratulate **Dr. John C. Morrison** of Jackson who received the *Dr. William A. Beaumont Award for Medicine*. This award was one of five major awards given by the American Medical Association. The Beaumont award goes to a physician under 50 years of age who "has made an outstanding contribution to medical research, teaching or clinical practice," according the AMA. Dr. Morrison, who was cited for improving the health of mothers and babies, is a professor in the Department of Obstetrics and Gynecology, University of Mississippi Medical Center.

MSMA Auxiliary member Nancy Lindstrom, wife of Dr. Eric E. Lindstrom of Laurel, was appointed a member of the National AMA-ERF Committee.



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# Dateline

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Volume XXXII, Number 8

## **CDC Releases Guides for HIV-Infected Physicians**

Atlanta, GA - The Centers for Disease Control issued guidelines for health care workers, including physicians, infected with human immunodeficiency virus or hepatitis B. In most respects, they are consistent with recommendations already proposed by the AMA. Both the AMA and the CDC require infected health care workers to inform patients for their serostatus before performing an invasive procedure. Both strongly oppose mandatory testing of physicians. Responding to the guidelines' release, AMA Trustee Nancy W. Dickey, MD, said, "We accept the charge to further identify exposure-prone procedures."

## **AMN Reports: Ethical Debate Continues Despite Death of Comatose Woman**

Chicago, IL - This month's death of a comatose Minnesota woman doesn't end the ethical debate that her case sparked over physician responsibility to provide care that may be deemed inappropriate. The case of an 86-year-old woman drew national attention partly because of its many ironies says an *American Medical News* report.

Experts note that this was the first time a hospital had gone to court to withhold treatment against a family's wishes. The trend previously had been families fighting to withhold treatment from a critically ill loved one.

Also ironic were the positions of many groups following the case. Representatives from those that back the right to die saw it as a patient rights issue. But at least one major anti-euthanasia group said it was a case in which "futile" treatments should be stopped, even if family members wanted them continued.

The final irony came when the woman died only three days after a judge ruled that her family could leave her indefinitely on the ventilator keeping her alive at the Hennepin County Medical Center in Minneapolis.

The hospital had petitioned the court in January to appoint an independent conservator to make medical decisions for the woman, who had been in a persistent vegetative state since May 1990. Physicians felt continued use of the ventilator was futile. But the judge ruled that the woman's husband was best able to articulate her wishes.

"It is important to understand what the judge did and didn't do," said hospital ethicist Steven Miles, MD. "She did not address the issue of whether we were obliged to use the ventilator ... This case in itself sets no precedent, and it doesn't answer the important question of whether a physician is obliged to provide inappropriate care."



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# Anabolic Steroids: Another Form of Drug Abuse

H. Thomas Milhorn, Jr., MD, PhD

Anabolic steroids are more accurately called anabolic androgenic steroids since they produce both protein synthesis and testosterone effects.<sup>1</sup> In this article, the term steroids will be used to refer to this group of drugs.

### HISTORY

The search for a superman formula has a long history, and has been thought to be related to testosterone. In the late 1800s the famous neurologist Brown-Sequard self-administered an extract of animal testosterone. Testosterone itself was synthesized in 1935, and used in an attempt to help chronically ill people replace lost muscle mass.<sup>2</sup> Steroids were reportedly given to German troops during the second world war to increase their aggressiveness.<sup>3</sup> The anabolic properties of testosterone were recognized in the early 1950s as having a potential use among athletes. Russian weight lifters began to use analogs of testosterone in 1954, and the practice spread to the United States in the late 1950s.<sup>2,3</sup> In 1973, the American Academy of Pediatrics stated that the use of steroids was contraindicated in adolescents.<sup>4</sup> In 1976 the International Amateur Athletic Federation banned their use by athletes participating in international competition, and in 1977 the American College of Sports Medicine officially opposed their use.<sup>4,5</sup> During the 1983 Pan American Games, several athletes were disquali-

fied when steroid use was detected, and dozens more voluntarily withdrew from the games for fear of detection.<sup>4</sup> The National Collegiate Athletic Association, in 1986, began drug-testing college football players in selected games. Ben Johnson, the Olympic Sprinter who set a world record in the 100 meter dash in 1988, was disqualified after testing positive for steroids.<sup>1,4</sup>

### THE ANABOLIC STEROIDS

Steroids in use today are derivatives of testosterone developed to maximize anabolic effects while minimizing androgenic effects (see Table 1). Injectable steroids are absorbed directly into the system circulation, and by avoiding the first-pass effect of the liver are less hepatotoxic than oral forms.<sup>6</sup> Oral forms are not detectable from 2 to 14 days after their last use. Injectable steroids can be detected for up to a month after their last use.<sup>5</sup>

### LEGITIMATE USES

Steroids in use today were developed by the pharmaceutical industry for a variety of medical indications - treatment of breast cancer, stimulation of red cell production in aplastic anemia, treatment of angioneurotic edema, and the production of growth in young males with growth failure. Medical usefulness cur-



**Table 1: SOME COMMONLY USED ANABOLIC STEROIDS**

ORAL FORMS		
Drug	Trade Name	Manufacturer
methandrostenolone	Dianabol	Ciba-Geigy*
oxandrolone	Anavar	Searle Laboratories
oxymetholone	Abadrol-50	Syntex laboratories
ethylestrenol	Maxibolin	Organon Diagnostics
stanozolol	Winstrol	Winthrop-Breon
fluoxymesterone	Halostestin	Upjohn
*Withdrawn for the market in 1982.		
INJECTABLE FORMS		
Drug	Trade Name	Manufacturer
nandrolone phenpropionate	Durobolin	Organon Diagnostics
nandrolone deconate	Deca-Durabolin	Organon Diagnostics
testosterone enanthate	Delatestryl	Squibb and Sons
testosterone cypionate	Depo-testosterone	Upjohn

rently is very limited, with probably less than 3 million prescriptions per year written for bonafide medical problems.<sup>2</sup>

### PATTERNS OF USE

A recent study of steroid use in a large suburban high school revealed that 4.4 percent of students used the drugs. Broken down by sex, 6.5 percent of males and 2.5 percent of females were steroid users. Athletes had a higher use rate (5.5%) than non-athletes. Use was highest for wrestling (13.3%) and football (12.2%) and lowest for track (4.0%) and swimming (5.0%). Students reported obtaining the drugs from coaches (23%), physicians (31%), friends (43%), and a variety of other sources (24%).<sup>4</sup> One-third of high school students reported beginning use prior to age 16.<sup>6</sup>

It has been estimated that more than 80 percent of athletes involved in body building, national and international weight lifting, power lifting, and field events such as shotput and discus throw use steroids.<sup>1,5</sup> One-half of professional football linemen and linebackers are thought to use the drugs.<sup>2</sup> A substantial number of female athletes, especially those involved in body building and power lifting, are thought to be steroid users.<sup>3</sup> Estimates of steroid use among college athletes have ranged from 5 to 20 percent.<sup>1</sup>

The normal secretion rate of testosterone is 4 to 10 mg/24 hours. Athletes have been reported to use 10 to 40 times this daily dose.<sup>6</sup> To maximize the ana-

bolic effects while minimizing potential health risks and likelihood of being detected, a regimen called "pyramiding" is often used. For example, an athlete might use the first 3 weeks of a 12-week regimen before a major competition by injecting himself weekly with 200 mg of testosterone cypionate and ingesting 10 mg of one of the oral forms daily. During the next 3 weeks the dose of the injected drug might be increased to 400 mg and the dose of the oral drug increased to 15 mg. For weeks 7 and 8 the weekly dose of the testosterone cypionate might be raised to 600 mg, the oral preparation to 20 mg, and a second oral preparation added, a process known as "stacking." During weeks 9 and 10, the dose of the injectable drug is reduced to 200 mg/week. The oral doses remain the same. During week 11, the first oral drug is discontinued as is the injectable one. During week 12, the second oral drug is discontinued. No drugs are used during the final week before competition.<sup>5</sup>

### WHY ATHLETES USE ANABOLIC STEROIDS

Athletes use steroids in the belief that the drugs increase body mass, muscle tissue, strength, and aggressiveness. Many feel that anabolic steroids decrease the recovery time following a workout. They often feel that they can perform weight-training workouts at a higher intensity and for longer periods of time with the use of steroids. They use them to promote



rapid healing of injuries, to keep up with their opponents, and to give them the winning edge.<sup>1</sup>

## DENIAL

Denial is a major symptom of drug abuse. It is not surprising that it plays a major role in steroid use.<sup>7</sup> Individuals who use steroids do not believe they are causing harm to anyone, including themselves - a "victimless crime." Athletes feel that they must use them if they want to compete seriously, especially at the national and international level. Due to a remarkable lack of knowledge about the health risks, they deny any possible harm. They make statements like, "Every drug, even aspirin, has side effects." They condemn those who criticize the use of anabolic steroids - "People who are against steroid use are not athletes. They just don't understand." They appeal to higher loyalties, sort of a code of commitment to the sport. Those competing at the international level may view steroid use as a patriotic act.<sup>8</sup>

## PHYSIOLOGICAL EFFECTS

Testosterone and the synthetic steroids combine with androgen receptors in skeletal muscle and other organs. This steroid-receptor complex stimulates production of RNA, which in turn leads to increased protein synthesis. Anabolic steroids also exert a positive effect on skeletal muscle by antagonizing protein breakdown.<sup>1,5</sup>

A review of existing literature revealed that steroids do not produce improvement in aerobic athletic performance, strength is improved only in weight lifters with intensive training before use was begun, and a high-protein diet increases strength in these athletes.<sup>3</sup>

Studies on the effects of steroids on performance are difficult to do for two reasons. First, there is no effective placebo for steroids. Athletes can tell when they are in the steroid group by the central nervous system effects on the drugs. Second, it is unethical to use the large doses of steroids in scientific studies that are used by athletes.<sup>1,5</sup>

## ADVERSE EFFECTS

The most commonly reported adverse effects of steroid use are hepatic and endocrine. Other effects include cardiovascular, skeletal, and behavioral (see Table 2).

**Liver** • Liver abnormalities, including increased

Table 2: SIDE EFFECTS OF ANABOLIC STEROIDS

### Hepatic

Hepatoma  
Cholestatic Jaundice  
Elevated liver Enzymes  
peliosis

### Endocrine

Acne  
Altered glucose tolerance  
Male pattern baldness  
Testicular atrophy  
Impotence  
Gynecomastia  
Oligospermia  
Decreased sperm motility  
Masculinization in females

### Skeletal

Early epiphyseal closure

### Cardiovascular

Hypertension  
Increased low-density lipoproteins  
Decreased high-density lipoproteins  
Increased cholesterol  
Increased cholesterol  
Increased triglycerides  
Fluid retention

### Behavioral

Increased libido  
Increased energy  
Irritability  
Aggression  
Psychiatric syndromes

liver enzymes, cholestatic jaundice, and rarely, peliosis hepatis (venous lakes which are subject to rupture) and liver carcinoma, may occur. Because serum levels of aspartate aminotransferase (AST; formerly SGOT) and alanine aminotransferase (ALT; formerly SGPT) may occur due to breakdown of skeletal muscle from heavy activity, the liver specific isoenzymes lactic dehydrogenase (LDH) and alkaline phosphatase should be used to monitor hepatic function in athletes.<sup>1,6,9</sup>

**Endocrine** • Steroids increase the proliferation of sebaceous glands, leading to acne in both sexes. They also alter glucose metabolism. Steroids affect the male



reproductive system in several ways. Normal gonadotropin and testosterone secretions are suppressed, and oligospermia and temporary infertility may occur, along with testicular atrophy. Secondary to the conversion of a small portion of the drugs to estrogenic compounds, gynecomastia is common in male steroid users. Steroids produce masculinizing effects in females (hoarsening of the voice, hirsutism, enlarged clitoris, decreased breast size, menstrual irregularities, and male pattern baldness).<sup>1,6</sup>

**Skeletal** • Steroid use in prepubescent children may cause premature sexual development and changes that limit height by causing premature closure of the epiphyseal growth plates.<sup>1,6</sup>

**Cardiovascular** • Whereas high-density lipoprotein (HDL) cholesterol concentrations would be expected to increase in well-trained athletes, many studies have documented decreased levels of HDL cholesterol and increased levels of low-density lipoprotein (LDL) cholesterol in such individuals using steroids. These changes probably increase the risk of cardiovascular disease. Other cardiovascular effects include hypertension, elevated triglyceride levels, and fluid retention.<sup>1,6</sup>

**Behavioral** • The use of steroids has been reported to cause irritability and aggressive behavior ("roid rage"), as well as severe depression and suicide when the drugs are discontinued. Users report euphoria, diminished fatigue, changes in libido, and mood swings.<sup>1,6,10</sup> Hallucination, ideas of reference, manic-like symptoms, and paranoid delusions may occur.<sup>2</sup>

Fortunately, most of the adverse effects of the drug except for peliosis, hepatoma and liver cancer, epiphyseal closure, baldness, and enlarged clitoris and hoarse voice in females are reversible with discontinuation of drugs.<sup>1,6</sup>

## OTHER APPROACHES

Other approaches used by athletes in attempts to improve performance include human growth hormone (HGH), amino acids, vitamins and minerals, glandular extracts, and blood doping.

**Human Growth Hormone** • Human growth hormone (somatotropin) is a hormone secreted by the anterior pituitary gland. It has widespread effects, including stimulation of amino acid uptake and protein synthesis, stimulation of lipolysis, and inhibition of glucose utilization. It is necessary for normal growth. Excess production in the adult produces acromegaly. The extent of HGH use by athletes is unknown, but the agent has wide potential for abuse.<sup>1</sup>

**Amino Acids** • Various amino acids are used by athletes who believe they produce increased endurance and muscle strength. There is no evidence that they actually do this.<sup>1</sup>

**Vitamins and Minerals** • Multivitamin complexes are used in an attempt to increase energy and endurance. There is no evidence that they actually do so. In reality, high doses of vitamin B complex may cause nausea, interference with absorption of other nutrients, and liver damage.<sup>1</sup>

Chromium and other minerals have been used to aid in carbohydrate metabolism, to delay fatigue, and to increase muscle mass. However, heavy metals (chromium, zinc, selenium) may cause liver and kidney damage, hair loss, anorexia, diarrhea, and possibly, muscle pain. Documentation of a positive effect is lacking.<sup>1</sup>

**Glandular Extracts** • Glandular extracts from liver, pancreas, lungs, and testicles have been reported by athletes to improve the function of the corresponding human organ. However, the body digests these substances in the same manner as it does any other protein.<sup>1</sup>

**Blood Doping** • Blood doping is the practice of having a quantity of one's blood drawn several weeks prior to an athletic event, and then transfusing it back to increase the hemoglobin concentration, and thereby the oxygen carrying capacity of the blood, just before the event.<sup>1</sup> A recent variant of this approach is the use of synthetic erythropoietin (Epogen), which has the potential risk of pathological blood clotting and adverse cardiovascular events.

## POTENTIAL SOLUTIONS

Steroid use is a serious problem, and one that is undoubtedly still increasing. Approaches to the solution of this problem include education, establishing a clear policy, drug testing, classifying the drugs as controlled substances, and modifying attitudes.<sup>1</sup>

**Education** • Education is essential. Many athletes and coaches perceive anabolic steroids as harmless substances. Coaches must be involved in the education process. They are critical in controlling steroid use.<sup>1,6</sup> Physicians, during the sports physical examination, can inquire about steroid use and provide some educational material.<sup>6</sup>

**Establishing a Policy** • Rules against the use of anabolic steroids should be instated, as well as the consequences of disobeying these rules. Should steroid use be detected, the consequences should be prompt. For students, the user should be confronted, the par-



ents should be informed, counseling should be initiated, and sanctions activated.<sup>1,6</sup>

**Drug Testing •** Drug testing should be conducted at college, professional, and Olympic levels. It is unlikely that testing for steroids in high school athletes will occur because of the expense of the test.<sup>1,6</sup>

**Classification as Controlled Substance •** The California state legislature, in 1985, placed these drugs under controls and imposed penalties for trafficking. Several other states followed suite. This approach to the problem, may ultimately play a major role in the prevention process.<sup>2</sup> Anabolic steroids were placed in schedule III by Congress on February 27, 1991.

**Modifying Attitudes •** An effort should be made to modify the "winning at all cost" attitude that is present in the American sport scene. This will be a difficult, if not impossible, task to accomplish.<sup>1</sup>

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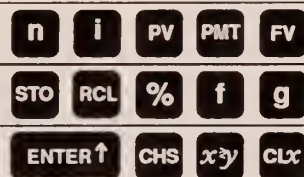
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# Young Patients with Colorectal Cancer: The University of Mississippi Medical Center Experience 1970-1990

PATRICIA L. RAYMOND, MD  
DEBORAH S. SKELTON, MD  
HENRY S. H. HSU, PhD

Like to gravity of cancer itself, inversely proportional to the age, the young stand the operation well, but have rapid recurrence; in the aged the operation is more serious, but the success is more lasting.

J.R. Pennington

*A Treatise on the Disease and Injuries of the Rectum, Anus, and Pelvic Colon, 1923<sup>1</sup>*

As early as 1923, Pennington understood the strikingly different nature of colorectal cancer in the child and young adult. No longer felt to be sporadic, it is estimated that 1% of all colon cancer occurs in patients less than thirty years of age<sup>2,3</sup> although colorectal cancer in patients less than twenty years old remains rare with an estimated incidence of one case per ten million population.<sup>4</sup>

Colorectal cancer in the young differs from that of the elderly in a number of aspects. Short duration of symptoms at time of diagnosis is seen even though diagnosis in the young patient is oftentimes delayed by low index of suspicion. Often symptoms in the young are attributed to gastroenteritis, mesenteric lymphadenitis, acute appendicitis, and intussusception, while the equivalent symptoms in the elderly lead to brisk advance to definitive diagnostic tests. Symptom duration averages from four to eight months in young adults with colorectal cancer at time of diagnosis.<sup>1,5,6</sup> Distribution of location of the primary tumor is found to be scattered throughout the colon, unlike the oft quoted preponderance of 60% of adult colorectal cancers within twenty-five centimeters of the anus.<sup>5</sup> Dukes

stage at presentation tends to be high in young patients (from 66 to 75% with Dukes C or D at initial surgery in some series),<sup>1,7</sup> and additionally histology reveals the more locally aggressive mucinous or signet ring adenocarcinoma in 33 to 50% of patients,<sup>6,8-10</sup> unlike the 5% prevalence in the elderly population.<sup>9,11</sup> Also, and as noted by Pennington above, these young adults have a tragically short recurrence free interval in most cases, as well as shortened survival (noted to be as little as 2.5% survival to five years post-op in the less than fifteen year old population<sup>2</sup> up to 41% five year survival overall in "older" young patients).<sup>5,6,12,13</sup> In most cases, these young adults and children are treated with the same surgical procedures and adjunct chemotherapy as their elderly counterparts,<sup>14</sup> despite the well known aggressive nature of the tumor in this age group.

In addition to these different presentation factors, different etiology of the tumor itself has been hypothesized. Unlike colon cancer in the adult, with an abrupt increase in frequency at age forty and peak frequency in the eighth decade of life,<sup>5</sup> some authors have noted an increased incidence in the pubertal years<sup>3,6</sup> in colorectal cancer in the young, perhaps implicating factors in the growth spurt or hormonal surges of that population. Racial factors may also come into play, with some authors stating an increased susceptibility in the black population<sup>11</sup> not reported in the adult literature. Precancerous conditions such as are present in the adult are not rare (such as familial polyposis or adenomatous polyyps),<sup>11</sup> but in the case



of ulcerative colitis an increased risk of colorectal cancer is found within five years of the initial diagnosis, as compared with greater than fifteen years of adult populations.<sup>3,8</sup> Bowel cancer in a relative has also been shown to convey increased risk of colorectal cancer in the young.<sup>6</sup>

Concern regarding environmental toxin factors in colorectal cancer has long been existent<sup>15</sup> particularly in the young.<sup>4,5,16</sup> A series recently reported by Caldwell, Cannon, Pratt et al<sup>16</sup> showed a cluster of patients in Mississippi, with a reported incidence of .82 cases per 100,000 patients less than twenty years old, five times the expected rate of .17 cases per 100,000 in this age group. Their paper brought forth the unproven hypothesis of pesticides and other farm chemicals with heavy usage in the Mississippi cotton, rice and soybean farm region as an associated factor in this increased incidence. Serum levels of pesticide residue in these clustered patients and their families<sup>16</sup> revealed elevated levels of chlorinated hydrocarbons (known to be stored and retained in adipose tissues, with serum and urine level reflective of intake and mobilization) which did not differ greatly from the levels in unaffected Mississippians. In other studies, DDT in human breast milk<sup>17</sup> was found to be elevated up to 19.17 ppm EDDT in highly exploited agricultural areas. Pesticide studies have revealed 6.72 kilogram of active ingredients per hectare in some areas of the Mississippi Delta in 1974 compared with .27 kilogram per hectare in less aggressively farmed regions of Mississippi.<sup>17</sup> Varying pesticide and herbicide levels have been found to be associated with the various Mississippi stream systems which drain these agricultural regions to the Mississippi River.<sup>18</sup>

Anecdotally, we had seen what we felt might be an abnormally large population of colorectal carcinoma patients less than forty years old pass through our tertiary referral center, and felt it to be of importance to characterize our population, and attempt to verify an increased incidence or geographically significant distribution of our patients with regards to areas of known elevated toxin levels in the state.

## MATERIAL AND METHODS

We reviewed the hospital records of all patients admitted to the University Hospital of the University of Mississippi Medical Center from 1970 to early 1990 using ICD-9-CM coding criteria for colorectal cancer, with additional criteria of age less than forty years at presentation. Sixty-eight patients with diagnosis of colorectal cancer under forty years of age

were identified, and charts were reviewed from initial presentation until death or loss to follow-up. Patients age, race, sex, city of residence, symptoms and their duration at diagnosis, location and pathology of primary tumor, Dukes stage and tumor extension at surgery, type of initial and later surgery as well as adjunct therapy, outcome, family history of gastrointestinal tract tumors, and personal risk factors (ulcerative colitis, colonic polyps, familial polyposis) were noted, and were entered into commercially available spreadsheet software.

Locations of primary tumors were assigned to one of the nine colorectal sites: cecum (CE), right colon (RC), hepatic flexure (HF), transverse colon (TC), splenic flexure (SF), left colon (LC), sigmoid colon (SG), rectum (RE), and unknown. For some analyses, these tumor sites were then grouped in accord with a survey by Fleshner et al<sup>19</sup> to right colon group (CE+RC=RCG), transverse colon group (HF+TC+SF=TCG), and left colon group (LC+SG=LCG). Disease stage was assessed by Dukes classification, with tumor confined to the mucosa or submucosa (Stage A), extension to the muscularis or serosa (Stage B), involvement of regional lymph nodes (Stage C), or distant metastases (Stage D).

Race and sex specific age variations were calculated, and patients were grouped into five-year age intervals to allow for additional correlation. Trends in race, sex, age, and location of primary tumor were sought. Symptoms and duration at presentation were tabulated, as were pathologic type and Dukes stage at surgery. Results of these data manipulations are found as Tables 1 and 2 and Figures I to V.

## CASE REPORTS

A fourteen year old black male with no family history of gastrointestinal tract cancer, or history of polyps or colitis, presented with an eleven month history of intermittent abdominal cramps, with one month history of increased severity of pain and hematochezia. Admitting laboratory was unremarkable except for microscopic hematuria. Proctoscopy was performed, and revealed ragged, friable mucosa at fifteen centimeters, with biopsy consistent with mucinous adenocarcinoma of the colon. Intravenous pyelography showed ragged bladder wall consistent with tumor involvement. Barium enema was interpreted as a constricting sigmoid lesion at fifteen centimeters, with no evidence of colovesical fistula. The patient underwent a pelvic exenteration with colostomy, cystectomy, and ileal loop conduit. He received no post



operative adjunct chemotherapy or radiation, and remains alive and well without evidence of recurrence fourteen years post op. Pathological examination confirmed the diagnosis of mucinous adenocarcinoma of the sigmoid colon with bladder wall involvement.

A twenty-two year old black female, gravida one, was seen by the surgical service twenty-four hours postpartum with nausea, vomiting, and increased abdominal swelling, with acute abdominal radiographs consistent with obstruction. With a preliminary diagnosis of intussusception, the patient was taken to exploratory laparotomy which revealed an obstructive tumor of the ascending colon, the surgical pathology found mucinous adenocarcinoma with spread to regional lymphatics. At follow-up for recurrent symptoms at nine months post-op, the patient was found to have recurrent tumor with metastatic spread to the peritoneum and to both ovaries. She died of progression of disease twenty-one months post diagnosis.

A twenty-eight year old black male with history of removal of multiple rectal polyps for rectal bleeding at age nine (pathologic diagnosis not available) presented to the medical center with two and a half years history of periumbilical pain, nausea, vomiting, and chronic gastrointestinal tract blood loss without improvement on empiric H2 blocker therapy. The patient had noted recent increase in pain, melena, and a ten pound weight loss, as well as an intermittent right lower quadrant mass. Esophagogastroduodenoscopy was unrevealing, but air contrast barium enema and colonoscopy confirmed the presence of a right colon mass. Surgical pathology revealed a Dukes B moderately differentiated adenocarcinoma with twenty-seven negative lymph nodes following a right hemicolectomy. The patient remained asymptomatic to two years post diagnosis when lost to follow-up.

## RESULTS

The medical records of sixty-eight patients with colorectal carcinoma with age at presentation of less than forty years were examined, and data in accord with the materials and methods section were tabulated.

### Sex and Race Distribution

The age distribution of sex and race was analyzed by a two-way analysis of variance which revealed no significant interaction between these two factors ( $P=0.9676$ ) Thirty-five males (51.5%) with an average of 29 years (range 14 to 39, standard deviation 7.2) and thirty-three females (48.5%) with an average age of 28 years (range 13 to 39, standard deviation

7.8) were studied, and no significant difference in age of presentation was noted ( $P=.5788$ ). Racial distribution did reveal age variation in our population, with forty-five black patients (66.2%) presenting with a younger average age of 26 years (range 13 to 39, standard deviation 7.3) as compared to twenty-three white patients (33.8%) with average age of 32 years (range 19 to 39, standard deviation 5.9), with a  $P$  value of .0007. These results are shown on Table 1.

Stratification of ages was then performed, with artificial grouping of patients of ages ten to fourteen years ( $N=2$ ), fifteen to nineteen years ( $N=6$ ), twenty

Table 1: AGE DISTRIBUTION BY RACE/SEX

	N	AVG	MAX	MIN	STD	VAR	
All Patients	68	28	39	13	7.	54	
Black	45	26	39	13	7.3	52	$P=0.0007$
White	23	32	39	19	5.9	34	
Male	35	29	39	14	7.2	50	$P=0.5788$
Female	33	28	39	13	7.8	59	
Black Male	23	27	39	14	7.	50	
Black Female	22	26	39	13	7.	53	
White Male	12	33	39	24	4.	23	
White Female	11	32	39	19	6.	44	

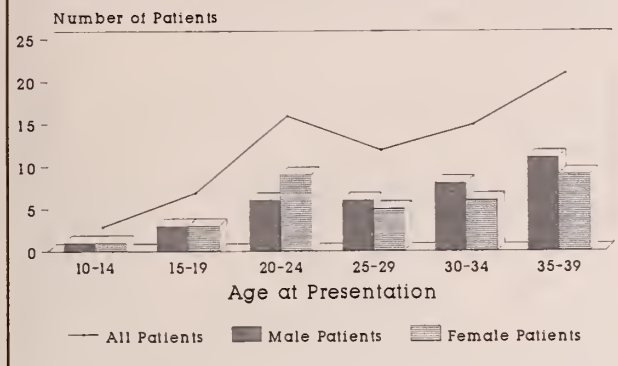
to twenty-four years ( $N=15$ ), twenty-five to twenty-nine years ( $n=11$ ), thirty to thirty-four years ( $N=14$ ), and thirty-five to thirty-nine years ( $N=20$ ). Analysis of these age groupings revealed no significant difference in numbers of male and female patients in each age group ( $P=.952$ ) (see Figure I), but again, analysis of race distribution revealed significant increase in the black population in the fifteen to twenty-nine years groups ( $P=.052$  overall). Figure II demonstrates the trend of pubertal increase in blacks in our population affected with colorectal cancer, with the gradual catching up of the white population in the thirty to thirty-four years age grouping. When divided by sex, this same trend is found both among males and females, with pubertal increase in the black population of both sexes (see Figure III).

### Clinical Presentation

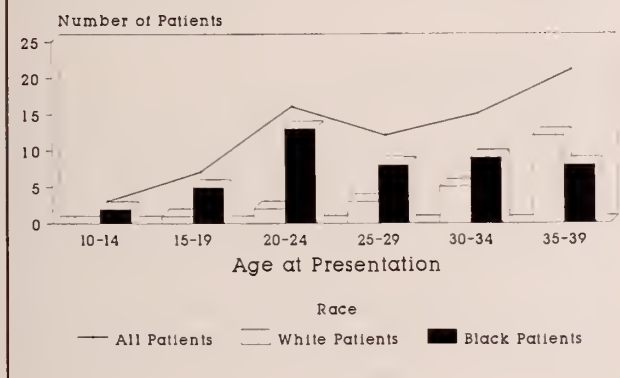
In our sixty-eight cases of colorectal cancer under



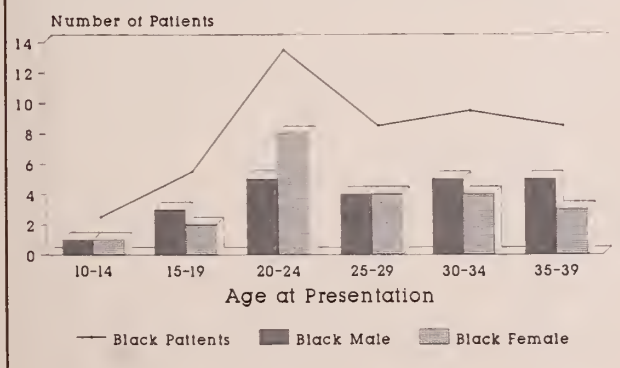
**Figure I**  
Age Distribution by Sex  
Young Patients with Colorectal Cancer



**Figure II**  
Age Distribution by Race  
Young Patients with Colorectal Cancer



**Figure III**  
Age Distribution Among Black Patients  
Young Patients with Colorectal Cancer



age forty, twenty (30%) of patients had symptoms for less than six months at presentation, with an additional seven (10%) for varying periods from six months to two years, and forty-one (60%) unreported. Symptoms in these patients varied, including abdominal pain (N=33), weight loss (N=21), melena or hematochezia (N=18), nausea and/or vomiting (N=11), and constipation (N=10), and lesser percentages of complaints of "mass", change in bowels habits, tenesmus, back pain, increased abdominal girth or ascites, symptoms of "acute appendicitis", anorexia, fistula formation, and obstruction. At surgery, twenty-eight (41%) were found to be mucinous or signet ring adenocarcinoma, thirty-seven (54%) were simply described as adenocarcinoma or well differentiated adenocarcinoma, and three patients had other tumors (granular cell blastoma, leiomyosarcoma, and squamous cell carcinoma). Dukes classification at surgery revealed no Dukes A (0%), eight patients with Dukes B (12%), twenty-nine patients with Dukes C (43%) and twenty-eight patients with Dukes D (41%), with Dukes C and D combined to 84%. The three patients with tumors other than adenocarcinoma constitute 4% of the total.

### Risk Factors

Eleven of our patients (16.2%) had family history of gastrointestinal tract tumor, with thirty-five (51.5%) without family history, and twenty-two (32.3%) unrecorded. Three patients in our group had personal risk factors, one patient with history of polyp removal at age nine as described in the third case report, one with familial polyposis, and one with Crohns colitis for five years prior to diagnosis.

### Site of Primary Tumor

In our sixty-eight patients, site of primary tumor was identified in sixty-six [CE=9 (13.2%), RC=5 (7.4%), HF=6 (8.8%), TC=6 (8.8%), HF=3 (4.4%), LC=12 (17.6%), SG=10 (14.7%), RE=15 (22.1%)] (see Figure IV)]. Average age for each tumor site, although varied (range 22 to 30 years), was not found to be statistically significant ( $P=.3059$ ) (see Figure V). Sex and race effects on tumor site were again not statistically significant ( $P=.476$  and  $.513$  respectively). Statistical difference may have been masked by division of our relatively small group of patients (N=66) into 16 groups, as in samples with groups of less than 5, the chi-square test may not be valid.

On combining the patients into the Fleschner grouping<sup>19</sup> (RCG=CE+RC=14, TCG+HF+TC+SF=15, LCG=LC+SG=22), we again find no significant dif-



Figure IV

Primary Tumor Location: All Patients  
Young Patients with Colorectal Cancer

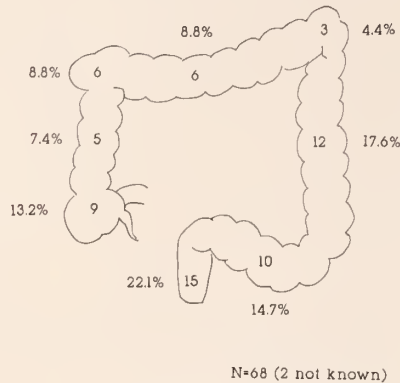
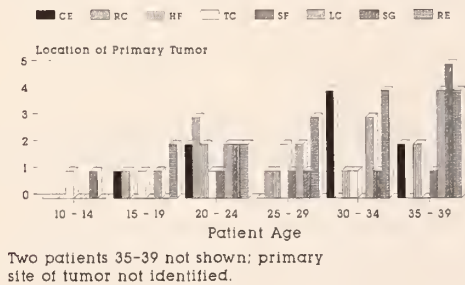


Figure V  
Primary Site of Colorectal Cancer  
Distribution by Age



Two patients 35-39 not shown; primary site of tumor not identified.

ference in tumor site distribution with race ( $P=.636$ ) or sex ( $P=.696$ ). We find an interesting trend in ages (see Table 2), with the mean age of each group increasing with distal movement: RCG= 26.8 years, TCG= 27.1 years, LCG= 29.8 years.

### Outcome

Many of our patients sought care from our tertiary referral center for diagnosis and initial surgery, but returned to their regional hospitals for completion of their care, so survival data remains incomplete. Of our sixty-eight patients, nine (13.2%) remained alive and well without evidence of recurrence to five years or greater post operation, eight patients remained alive and well without evidence of recurrence less than five years post operation (11.8%), one patient is currently undergoing chemotherapy post-resection (.02%), twenty-nine patients (42.6%) either died or were lost to follow-up after documented progression of their disease and are presumed dead, and twenty-one patients (30.9%) returned to their regional hospitals after initial surgery and data regarding outcome is unavailable.

### Geographic Distribution

City of residence from admission data were plotted for each patient on a Mississippi map, with attention given to age of onset (either <20 or >20 and <40 group) and site of primary tumor. A relative increase in patients from the western portion of Mississippi in areas corresponding to the Yazoo and Big Black River systems<sup>18</sup> was noted, but this apparent trend is most likely bias secondary to our geographic referral base. Formation of a statewide tumor board will be an im-

Table 2: PRIMARY TUMOR SITE: AGE, RACE, AND SEX DISTRIBUTION

	N	Ave Age	MAX	MIN	STD	VAR	BM	BF	WM	WF
All	68	28	39	13	7.	54	23	22	12	11
CE	9	29	39	17	6.	48	2	4	2	1
RC	5	22	28	18	3	10	2	2	0	1
HF	6	29	39	20	6.	40	4	1	1	0
TC	6	23	34	13	7.	51	3	3	0	0
SF	3	30	36	23	6.	43	0	1	1	1
LC	12	29	39	16.	6.	47	6	2	3	1
SG	10	30	39	14	8.	67	3	3	1	3
RE	15	29	39	15	7.	50	3	6	4	2
UNKN.	2	35.5	36	35	0.	0	0	0	0	2
RCG	14	26.8	39	17	7.1	50.5				
TCG	15	27.1	39	13	7.7	59.9				
LCG	22	29.8	39	14	7.2	60.1				



portant factor for further analysis of geographic distribution.

### Estimated Death Rate in Mississippi

As appropriate data to calculate overall incidence of colorectal cancer in Mississippi is unavailable (no statewide tumor registry is yet available), the Department of Vital Statistics of the State Department of Health was contacted. They provided data on colorectal cancer deaths in populations less than twenty and forty years of age from 1970 through 1988 (N=19 and 220, respectively). Total population was estimated for each age group based on population data generated by and extrapolated from the 1970 and 1980 census. We calculated a death rate of .11 cases per 100,000 population in the less than twenty years age group, and of .70 cases per 100,000 population in the less than forty years age group.

### DISCUSSION

In our review of the past twenty years experience with colorectal cancer in children and young adults (less than forty years of age) at the University of Mississippi Medical Center, we find our population to be similar to previously reported groups with short duration of symptoms at presentation,<sup>1,5,6</sup> distribution of location through the colon without as strong a preponderance of rectosigmoid cancers as found in review of the elderly<sup>5,19</sup>, high Dukes stage at operation<sup>1,7</sup>, and high prevalence of mucinous or signet ring adenocarcinoma histology.<sup>6,8-10</sup> Family history of colorectal cancer was found in 16.2% of our patients.<sup>6</sup>

We additionally find a lower age of diagnosis in our black population (26 versus 32 years,  $P=.0007$ ), as well as a pubertal increase colorectal cancer found only in our black population, and true for both sexes.

Distribution of primary tumor site was not found to vary with race or sex as has been reported in the elderly,<sup>19</sup> but biostatistical analysis reveals a trend in age according to site, with increase in age on progression from right colon (26.8 years) to transverse (27.1) years and left colon (29.8 years).

Survival statistics for our patients remain incomplete, as a number of our referral patients return to their regional medical centers for adjunct therapy or supportive care. In addition, incidence within the state cannot as yet be assessed, due to lack of statewide reporting to a central tumor registry. Death rate from colorectal cancer in Mississippi does not adequately reflect the actual incidence, as five year survival in the literature may range from 2.5%<sup>2</sup> to 41%<sup>5,6,12,13</sup> de-

pending on the range of ages in each study. Trends in distribution of colorectal cancer within the state, and their possible distribution in reference to environmental toxins, cannot be reliably assessed without information about all cases within the state to eliminate our referral base bias.

Mississippi needs to provide funds for establishment of a Mississippi Tumor Registry to allow for further study of these patients and those with other cancers. Only by statewide reporting can the magnitude of these cancers in young adults and children be assessed, and better modes of therapy be developed.

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# Protection of the Unstable Spine During Transport and Early Hospitalization

ROBERT A. McGUIRE, Jr., MD

**E**xtrication techniques and early emergency care have allowed more severely injured patients to arrive at trauma centers in salvageable conditions. Techniques of stabilizing the spine must be addressed in order to prevent neurologic damage or further deterioration in patients with existing deficits.

## Cervical Spine

When paramedics arrive on the scene of an accident, they must assume an unstable spine exists. The cervical spine can be protected by a variety of orthoses to allow transport. Four commonly used orthoses are the Philadelphia Collar, Stifneck, Necloc, and the Philadelphia Collar Stabilizer System. Johnson evaluated several off-the-shelf collars including the Philadelphia Collar which he found to allow 70% of normal flexion, 43% of normal extension and poor control of lateral bending.<sup>1</sup> Secor tested the Stifneck and found it to limit 87% of flexion, 57% extension, 50% rotation and 37% of lateral bending.<sup>6</sup> Kaufman tested the Necloc and found it to be superior to the Philadelphia Collar in restricting motion in the A/P plane, lateral flexion and axial rotation.<sup>2</sup> These studies were performed on normal cervical spines without evidence of instability. A recent investigation performed on unstable cervical spines using the Philadelphia Collar (see Figure 1A), Stifneck (Figure 1B), Necloc (Figure 1C) and the Philadelphia Collar Stabilizer System (Figure 1D) revealed a statistically significant improvement in the Philadelphia Collar Stabilizer System's ability to resist translation and sagittal rotation with collar application and the application of a 5 lb. flexion force.<sup>3</sup> The Philadelphia Collar Stabilizer System is a modular system which allows the head to be rigidly attached to the chest preventing further displacement of the spine, therefore, providing protection of the neural elements and surrounding soft tissues.

Once the patient reaches the emergency room, ap-



Figure 1A  
Philadelphia Collar



Figure 1B  
Stifneck



Figure 1C  
Necloc



Figure 1D Philadelphia  
Collar Stabilizer System

propriate radiographs are obtained. If an unstable situation exists, skull traction is applied to immobilize the cervical spine. This allows realignment of the bony elements and protects the soft tissues from further damage. If the patient's condition does not allow internal fixation or further studies are needed to evaluate the injury, the patient can be immobilized in a Roto-Rest bed with tongs and traction in place until definitive treatment can be provided.



### Thoracic, Thoracolumbar, Lumbar Spine

Injuries occurring in the thoracic spine often lead to paralysis due to the cord/canal ratio. In the thoracic spine 80% of the bony canal is filled by the spinal cord. This anatomic configuration allows very little displacement before damage to neural elements occurs.

The thoracolumbar spine is unique anatomically. From cephalad to caudad it progresses from a relative rigid thoracic spine to a mobile lumbar spine. The spinal cord ends in this region with many of the nerve roots exiting cephalad. Neural deficits occurring from thoracolumbar lesions, therefore, have a mixed pattern of both upper and lower motor neuron involvement.

The lumbar spine provides the largest canal diameters and neuro-anatomically only nerve roots fill the canal (exception being tethered cord syndrome). Neurologic lesions are lower motor deficits exhibiting a single root, multiple roots or cauda equina involvement.

Transport of patients with these injuries is best accomplished using a back board providing rigid spinal support. The patient may also remain on this device while obtaining appropriate radiographic studies. One must be aware of potential problems arising when transferring the patient to the back board.<sup>4</sup>

When log rolling an individual, the natural tendency of the spine is to sag at the thoracolumbar junction between the fixed thoracic cage and the pelvis. This causes a shearing force to occur across these segments. We found the unstable segment in the cadaver to move 2.1 cm in the A/P plane, 5mm laterally and rotationally 30 degrees with the log roll maneuver.

(see Figure 2A-B) We also found a 7 mm lateral displacement to occur in a patient with a T12-L1 fracture dislocation who was log rolled on the radiographic table while undergoing angiography for a suspected traumatic aneurysm. The safest method of back board placement is using the scoop stretcher for transferring the patient.<sup>4</sup> This method minimized shearing forces acting through the unstable segment, therefore, preventing further displacement of the spine.

Once the patient reaches the hospital and is evaluated, appropriate treatment can be instituted. The ma-



Figure 2A Log roll maneuver reveals 30 degree rotational change and translation.



Figure 2B Lateral View during log roll maneuver reveals 2.1 cm A/P shift.



jority of cases will be surgically stabilized. In the event surgery is delayed or the fracture is to be treated with prolonged bed rest, the patient is transferred to a Roto-Kinetic bed. This device provides stability for the spine as well as the benefits of improved nursing care, increase postural drainage of the lungs and prevention of deep vein thrombosis.

We found the kinetic therapy table to provide stability in all planes of motion in an unstable L1-L2 segments of the cadaver spine when carried through the 125 degree arch of the bed's rotation. (see Figure 3A-B) Comparison using the Stryker frame revealed a 2.1 cm A/P displacement in going from supine to prone position as well as angular changes occurring through the unstable segment. (see Figure 4A-B) We feel the Roto-kinetic table to be a superior to other

methods in immobilizing the spine and it obviates the need of the potentially dangerous log roll maneuver.<sup>5</sup>

### Conclusion

Spine injury is of prime concern in all patients with major trauma. Instability can lead to potential paralysis and must be dealt with appropriately. Extrication and transport of the cervical spine injury in the Philadelphia Collar Stabilizer System and then placement in Gardner Wells tongs for acute instability is recommended. For thoracic, thoracolumbar and lumbar injuries, placement on a back board using the Ferno-Washington (scoop) stretcher is recommended. The log roll maneuver is potentially dangerous and must be used with extreme caution. For patients unable to be treated with immediate surgery, placement on a



Figure 3A-B There is no change in spinal alignment of the Roto-Rest bed throughout the 125 degree rotation. (The bed rotates 62.5 degrees bilaterally).



Roto-kinetic bed until the spine can be surgically stabilized is recommended. Postoperatively, the patient can be mobilized in the same bed to minimize the morbidity associated with recumbent therapy.

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Jackson, Mississippi

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*Dr. McGuire is from the Department of Orthopaedics, University of Mississippi Medical Center.*

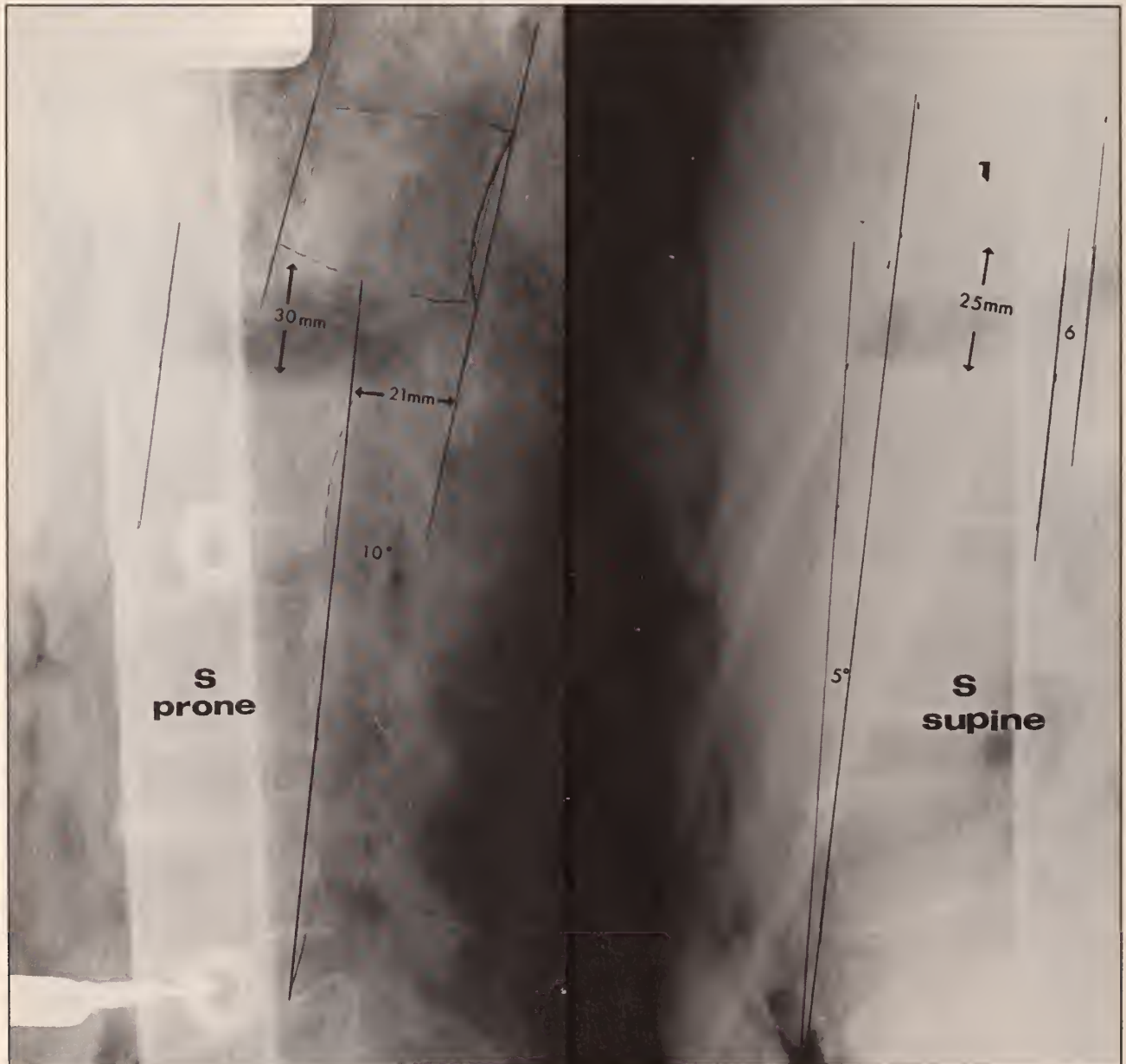


Figure 4A-B The unstable spinal segment is noted to move 2.1 cm on the Stryker frame. It is important to note the spinal canal is completely occluded with the translation.





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## The President's Page

JAMES C. WAITES, MD

### JEFFERSONIAN DEMOCRACY

By the time this column is read by you, we should have some information relative to the position that HCFA has taken after the massive letter writing campaign that was instituted through MSMA by the AMA. I certainly hope that each of you took full advantage of writing your Congressman and HCFA regarding proposed rule-making that would cut Medicare Fees by 16% and would affect each and every physician in America today. I would like to thank each of you who did write, and at the same time chastise each of you who did not. If you felt like this was not your fight, you were dead wrong. I've been aptly reminded on several occasions that once we stick our head in the sand to avoid a problem, we expose a very vital part of our anatomy to be taken by the enemy.

Since much of this issue of the Journal is devoted to the AMA Meeting, I thought it would be relevant to share a few thoughts with you regarding the meeting. I was told at the first AMA Meeting I attended that I was going to witness one of the most democratic institutions in action that I had ever seen, and I came away with that feeling. At this last meeting I was privileged to talk to a young AMA Delegate, who pointed out to me that the AMA might be the last bastion of Jeffersonian Democracy in action. As I understand, Mr. Jefferson thought the business of the country should be run by the educated, participating in active debate and arriving at consensus, and certainly that is an apt description of what goes on at the AMA. It would be hard to describe that action that goes on in the reference committees. We go into session on Sunday afternoon. We are presented with a mountainous volume of information, both in the way of reports from Boards, Councils, and the resolutions from States and individuals. At the meeting these are all presented and assigned to a reference committee. On Monday morning the reference committees go into action, beginning usually around 8:30 to 9:00 a.m. Each member of the Mississippi Delegation is assigned to attend one of these reference committee meetings. We prepare ourselves by talking to various delegations, listening to the reports, participating in the reference committees and reading the materials mailed to us. It is at these reference committees that hours upon hours are spent debating the issue. There is rarely a time limit placed on the debate unless it appears that there is not going to be an opportunity for everybody to speak on the issue. I recall very vividly at the meeting in Honolulu where Carl Evers chaired the reference committee that debated AIDS. The committee started early, took no breaks whatsoever, and finished some 10-12 hours later with the debate on just the issue of AIDS and AIDS Legislation. The same thing could be said for the meeting this year when we again debated AIDS. We also debated RBRVS and practice parameters. I certainly cannot say that each of us agreed with the outcome of the debate on

*(Continued on page 326)*



## GAY

In recent years the meaning of a good word for lively, merry, happy, or light-hearted has been abrogated. Its true meaning has been ruined forever with its new connotation -- that of being synonymous with homosexuality. Since when, or better why, did our society suddenly decide that being homosexual was the "In" thing. I may lack understanding; I may be called a prude, a bigot, a narrow-minded social "nut" of some kind; or I may be just plain old fogey but for the life of me I cannot fathom the current wave of popularity for the homosexuals.

Our society has evolved from the "Peace-niks" of the 1960's through the era of sexual freedom to the now newly realized freedom of being homosexual. I don't know what the next stage in this societal development is but it will surely be interesting -- you can count on that.

I realize that although our country was originated by people looking for religious freedom that "In God We Trust" has been pushed aside in an effort to give everyone the freedoms that our present generation is so intent on having. I am not some kind of religious "nut", but I have read the Bible; I have talked with Jews, Catholics, Baptists; and nowhere can I find approval for homosexuality. In fact, most of the people feel that if it is not a sin that it is close to it.

I read about the parades in California with hundreds of thousands of homosexuals there and it really makes me wonder who is doing the procreating these days. When I grew up it was said that there was a homosexual in every twenty men. I wonder what the statistics show now? Being in rural Mississippi things are a bit different. Of the four homosexuals in my practice, that I know of, two have died from AIDS, one is HIV positive and the other is okay, in so far as I know. It makes you wonder if the higher powers aren't taking care of the world over population and the homosexual problem at the same time.

I surely would hate for a child of mine to grow up now with the great approval of homosexuality and

emphasis on it in the news media. Most every child goes through a stage in their development when they tend to be bi-sexual; later to develop the characteristic behavior of their particular sex. It must be harder for children to decide now with the change in attitude toward homosexuality.

One of the causes for this societal upheaval is the decline of the family unit. It has been said that only 5% to 15% of families are of the classic father working/mother staying at home caring for the children. With single parent families, reversal of the mother/father roles, and other life style changes it is all the more difficult for boys to grow up as men and girls as ladies.

This subject is a good example of the vocal minority ruling the silent majority. You surely do hear more and read more about the homosexuals now than in previous times. I believe that it is time for the silent majority to speak up or we may find ourselves and our nation collapsing from within as the Roman empire did.

I would like to see us as good citizens, interested physicians, and community leaders work toward strengthening the family unit and as individuals try to be the best role models for the youth in our areas that we can be. The present trend must not be allowed to continue.

Thank God that I am a physician that can help make changes in my community and my world.

Joe Johnston, MD  
Associate Editor





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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **OPINIONS ON PRACTICE MATTERS**

### **Appointment Charges**

A physician may charge a patient for a missed appointment or for one not cancelled 24 hours in advance if the patient is fully advised that the physicians will make such a charge. The practice, however, should be resorted to infrequently and always with the utmost consideration for the patient and his circumstances.

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### **Clinics**

Physicians practicing in a group or clinic are, both individually, and as a group, subject to the Principles of Medical Ethics.

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### **Conflicts of Interest: Guidelines**

Physician ownership interest in a commercial venture with the potential for abuse is not in itself unethical. Physicians are free to enter lawful contractual relationships, including the acquisition of ownership interests in health facilities or equipment of pharmaceuticals. However, the potential conflict of interest must be addressed by the following: (1) the physician has an affirmative ethical obligation to disclose to the patient or referring colleagues his or her ownership interest in the facility or therapy prior to utilization; (2) the physician may not exploit the patient in any way, as by inappropriate or unnecessary utilization; (3) the physician's activities must be in strict conformance with the law; (4) the patient should have free choice either to use the physician's proprietary facility or therapy or to seek the needed medical services elsewhere; and (5) when a physician's commercial interest conflicts so greatly with the patient's inter-

est as to be incompatible, the physician should make alternative arrangements for the care of the patient.

---

### **Consultation**

Physicians should obtain consultation whenever they believe that it would be helpful in the care of the patient or when requested by the patient or the patient's representative. When a patient is referred to a consultant, the referring physician should provide a history of the case and such other information as the consultant may need and the consultant should advise the referring physician of the results of the consultant's examination and recommendations relating to the management of the case. A physician selected by a patient for the purpose of obtaining a second opinion on an elective procedure is not obligated to advise the patient's regular physician of the findings or recommendations.

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# Medical Organization

## Dr. Carl Evers Elected to AMA Council on Medical Education

Dr. Carl G. Evers of Jackson was elected to the American Medical Association (AMA) Council on Medical Education at the organization's annual meeting June 23-27 in Chicago, Ill.

Dr. Evers, who is a professor of pathology, associate dean for academic affairs in the medical school, and director of the cytotechnology training program at the University of Mississippi Medical Center, is the first Mississippian to be elected AMA council member. His candidacy was sponsored by the Mississippi State Medical Association and its Delegation to the American Medical Association and endorsed by the Section on Medical Schools and the College of American Pathologists. He received a majority vote of some 440 members of the AMA House of Delegates from across the county.

Dr. Evers has been a Mississippi Delegate to the American Medical Association since 1986 and member of the Section on Medical Schools since 1972. He has served the Mississippi State Medical Association in several capacities including president from 1979-1980, member of the Board of Directors, Speaker for the House of Delegates, member and chairman of the Council on Medical Education, and is presently a member of the Board of Directors for the Mississippi Physicians Insurance Company of the MSMA.

Dr. Evers earned the MD in 1959 at the University of Minnesota and took his residency at UMC. He holds professional memberships in the College of American Pathologists, American Society of Clinical Pathologists, American Society of Cytology, The United States and Canadian Academy of Pathology, Association of American Medical Colleges and the American Association for Cancer Education.

Dr. Evers will serve with 12 other members (10 physicians, one student and one resident) on the Council on Medical Education, which maintains a significant role in maintaining the excellence of the system of medical education in the U.S. The council meets

four times a year to develop and revise policies which determine the essentials for accreditation of graduate schools, postgraduate programs, residencies, allied health programs, continuing education and medical licensure in the U.S.

## Dr. Sorey Named Chief of Bureau of Health Services



Dr. William H. Sorey of Jackson was named chief of the Bureau of Health Services for the Mississippi State Department of Health July 1, 1991.

The Bureau of Health Services includes more than 17 separate public health programs, including two of the agency's largest: WIC, the federally-funded Special

Supplement Food Program for Women, Infants, and Children; and Home Health Services.

A board-certified pediatrician, Dr. Sorey previously served as medical director for the Children's Medical Program at MSDH. Both of these programs fall under his administration within the bureau.

"I'm excited about my expanded role in public health and increased responsibility to the people of this state," Dr. Sorey said. "I'm especially interested in the well-being of Mississippi children and insuring they get the best possible start in life."

Dr. Sorey is a graduate of the University of Mississippi and the University of Mississippi School of Medicine. His medical training includes an internship and residency in pediatrics and an adolescent medicine fellowship at University Hospital in Jackson.

Dr. Sorey is a member of the American Medical Association and the Mississippi Medical Association. He is also a lieutenant commander in the U.S. Naval Reserve, Medical Corps.



## Dr. J. Edward Hill Selected to Serve on Harvard Panel

Dr. J. Edward Hill of Hollandale has been selected to serve on the Technical Expert Panel of the Harvard Resource-Based Relative Value Scale (RBRVS) study for Family Practice. He was selected from the nominations put forward by the American Academy of Family Physicians.

The Harvard School of Public Health is seeking to validate and extend the results from their national survey process that established the initial set of resource-based relative values. Since the original survey process only permitted the Harvard School of Public Health to gather information on only a limited number of services in each specialty, they are now seeking to provide additional estimates of the work involved for various services provided in each specialty.

Dr. Hill and other physicians within each specialty will be providing the additional estimates of work by completing extensive survey forms for the next several months. Additionally, these physicians will be assisting in the validation of the values of various services and further testing of the sensitivity of the resources-based results.

## Heart Association Holds Annual Meeting and Delegate Assembly



*Dr. Authur C. Guyton spoke to the American Heart Association, Mississippi Affiliate's Annual Meeting and Delegate Assembly. Before his keynote address, Mississippi Affilitate leadership greeted Dr. Guyton. Pictured above, from left to right, are Tom Herrin, MD, chairman-elect of the Southern Regional Heart Committee, Paul Breazeale, chairman of the board, Dick Cowart, state campaign chairman, Dr. Authur Guyton, professor emeritus of physiology and biophysics at the University of Mississippi's School of Medicine, Bill Ray, past chairman of the board, and Henry Tyler, MD, past president.*



*Dr. Hill, right, is pictured with Arkansas Governor Bill Clinton, left, at the recent National Governor's Association Health Care Task Force Regional Hearing held in Little Rock Arkansas.*

**Mark your calendar !!!**

**MSMA  
124th Annual Session  
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# Mississippians Take Active Part



▲  
Dr. Carl G. Evers  
elected to the AMA  
Council on Medical  
Education.

Dr. George E. McGee  
appointed to the AMA  
Council on Long Range  
Planning and Develop-  
ment.



▲  
Dr. John C. Morrison  
received the *Dr. William  
A. Beaumont Award for  
Medicine*.



Dr. Sidney O. Graves  
assumes chairmanship  
of the Southeastern  
States Delegation.





# In AMA 1991 Annual Meeting



◀ Dr. Bill Gates served on AMA Reference Committee C.



▲ Mrs. Merrell Rogers immediate past president of the Mississippi State Medical Association Auxiliary.

Dr. R. Faser Triplett is chairman of the AMPAC Board of Directors.



▶ Dr. J. Edward Hill served on AMA Reference Committee F and is a member of the AMA Council on Legislation.





# Seven Receive AMA Jackets

Seven members of the Mississippi Delegation were presented jackets during the AMA annual session. Pictured below, Drs. Nix, Evers and Morgan were presented their jackets by Dr. John Lee Clowe AMA president-elect. At right, Drs. McMillan, Burnett, Gates and McGee received their jackets from AMA Speaker of the House Dr. Daniel H. Johnson, Jr.





# AMA House and Reference Committees

- There were 438 delegates seated initially and the House voted to seat the following four additional specialty societies, bringing the total voting delegates to 442.
  1. American Medical Directors Association
  2. Society of Cardiovascular & Interventional Radiology
  3. Society of Critical Care Medicine
  4. American Orthopaedic Foot & Ankle Society
- The delegates agenda contained 106 reports and 263 resolutions.



*The Mississippi delegation, shown above and below, had choice first and second row seats this year in the AMA House. During the lengthy house sessions, delegates and alternate delegates occasionally swapped places.*



*Seating for Alternate Delegates and guest was located along the perimeter of the auditorium. From left, Dr. Cobb, Dr. Morgan, Dr. Clippinger, Dr. Lee, Dr. Kellar and Dr. Magee are shown seated in the alternate delegate section.*



*Each member of the Mississippi delegation was assigned a reference committee. Above, Dr. Waites attended reference committee A where the majority of the discussion centered around the RBRVS. Below, Dr. Cobb attended reference committee D and heard the discussion on HIV testing.*





# Delegation Caucus



Early each morning the entire Mississippi delegation: delegates, alternate delegates, medical student representatives, and guest, met for breakfast.

During this session, delegates gave a full report of the resolutions presented in each reference committee. Issues were discussed and questions asked as the caucus came to agreement on how it would vote each issue.

Campaign strategy was also a key issue of discussed each morning. Members reported on the responses received from other delegations regarding Dr. Ever's candidacy for the AMA Council on Medical Education.





# The Campaign



*Dr. Sidney Graves and Dr. Carl Evers shook hands at many receptions.*



*Above, Dr. Candace Kellar campaigned and gave guest "Mississippi stickers" during the Southeastern States Reception.*

*Below, medical students Kirk Mullins and Russell Betcher campaigned on Dr. Evers behalf.*



*Dr. Jimmy Waites served as Dr. Evers campaign chairman.*

*Below, Dr. Evers and his wife Jan greeted guest as they attended the Southeastern States Reception.*



**The Victory Speech  
to the AMA House**



# Events



◀ Representing Mississippi in the AMA Auxiliary House of Delegates were, *front row from left*, Jean Hill past president AMA Auxiliary; Merrell Rogers immediate past-president MSMA Auxiliary; Sylvia Walker president MSMA Auxiliary; *back row from left*, Kathy Stumme MSMA Auxiliary treasurer; Nancy Lindstrom National AMA-ERF com. member; and Kathy Carmichael, MSMA Auxiliary president-elect.

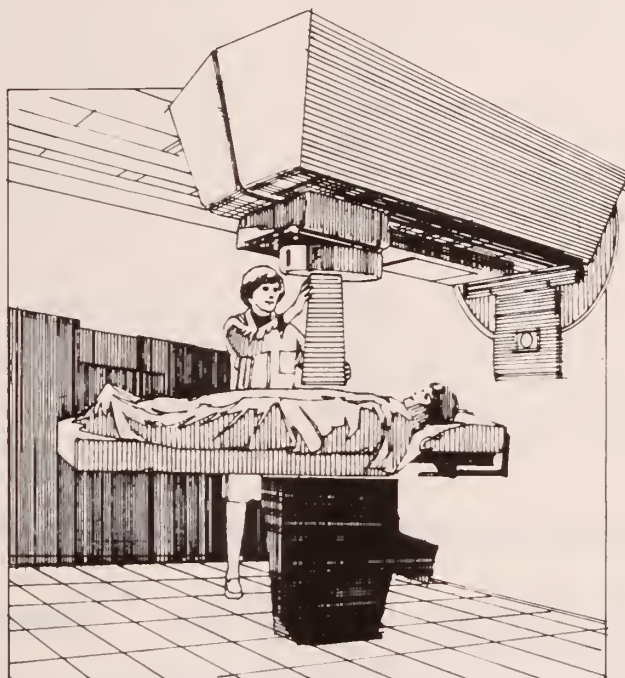
▶ The Mississippi Delegation honored Dr. John C. Morrison with a dinner after he was presented the *Dr. William A. Beaumont Award* in the opening session of the AMA House of Delegates. Some of the guested were, *from right*, Dr. and Mrs. Wisner, Mrs. Morrison, Dr. Morrison, Dr. Nelson and Dr. Waites.





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## New Members

**Barraza, Kenneth R.**, Jackson. Born New Orleans, LA, February 7, 1956; MD University of Mississippi School of Medicine, Jackson, MS 1984; interned and general surgery residency University of South Alabama Medical School, Mobile, AL 1984-89; plastic surgery residency, University Medical Center, Jackson, MS 1989-91; elected by Central Medical Society.

**Beddingfield, John J., III**, Jackson. Born Meridian, MS, February 19, 1958; MD University of Mississippi School of Medicine, Jackson, MS 1985; interned and psychiatry residency, University Medical Center and V. A. Hospital, Jackson, MS, 1985-90; elected by Central Medical Society.

**Callender, William Ray, Jr.**, d'Iberville. Born Magnolia, MS March 29, 1951; MD University of Mississippi School of Medicine, Jackson, MS 1981; interned and family practice residency, Carswell AFB, Ft Worth, TX 1981-84; elected by Coast Counties Medical Society.

**Duff, Rebecca R.**, Hattiesburg. Born Pensacola, FL, March 16, 1960; MD University of Mississippi School of Medicine, Jackson, MS, 1987; interned and dermatology residency University of Texas Medical Branch, Galveston, TX 1987-91; elected by South Mississippi Medical Society.

**Edney, Daniel P.**, Vicksburg. Born Meridian, MS, September 15, 1961; MD University of Mississippi School of Medicine, Jackson, MS 1988; interned and medicine residency, University of Virginia Hospital, Charlottesville, VA, 1988-91; elected by West Mississippi Medical Society.

**Fox, H Creed**, Hattiesburg. Born Clarksdale, MS, December 15, 1959; MD University of Mississippi School of Medicine, Jackson, MS, 1985; interned and medicine and gastroenterology residency, University of Tennessee College of Medicine, Memphis, TN 1985-91; elected by South Mississippi Medical Society.

**Hamrick-Turner, Jennifer E.**, Jackson. Born Meridian, MS, July 11, 1959; MD University of Mississippi School of Medicine, Jackson, MS, 1985; in-

*"A Sign of the Times!"*



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terned and radiology residency, University Medical Center, Jackson, MS 1985-90; abdominal imaging fellowship, University of Florida, Gainesville, FL one year; elected by Central Medical Society.

**Lewis, Edmund G.,** Jackson. Born Cairo, Egypt, January 20, 1962; MD University of Mississippi School of Medicine, Jackson, MS 1988; interned and medicine residency University Medical Center, Jackson, MS 1988-91; elected by Central Medical Society.

**Massingill, Samuel S.,** Meridian. Born Meridian, MS, March 16, 1962; MD University of Mississippi School of Medicine, Jackson, MS 1988; interned and pediatric residency University Medical Center, Jackson, MS 1988-91; elected by East Mississippi Medical Society.

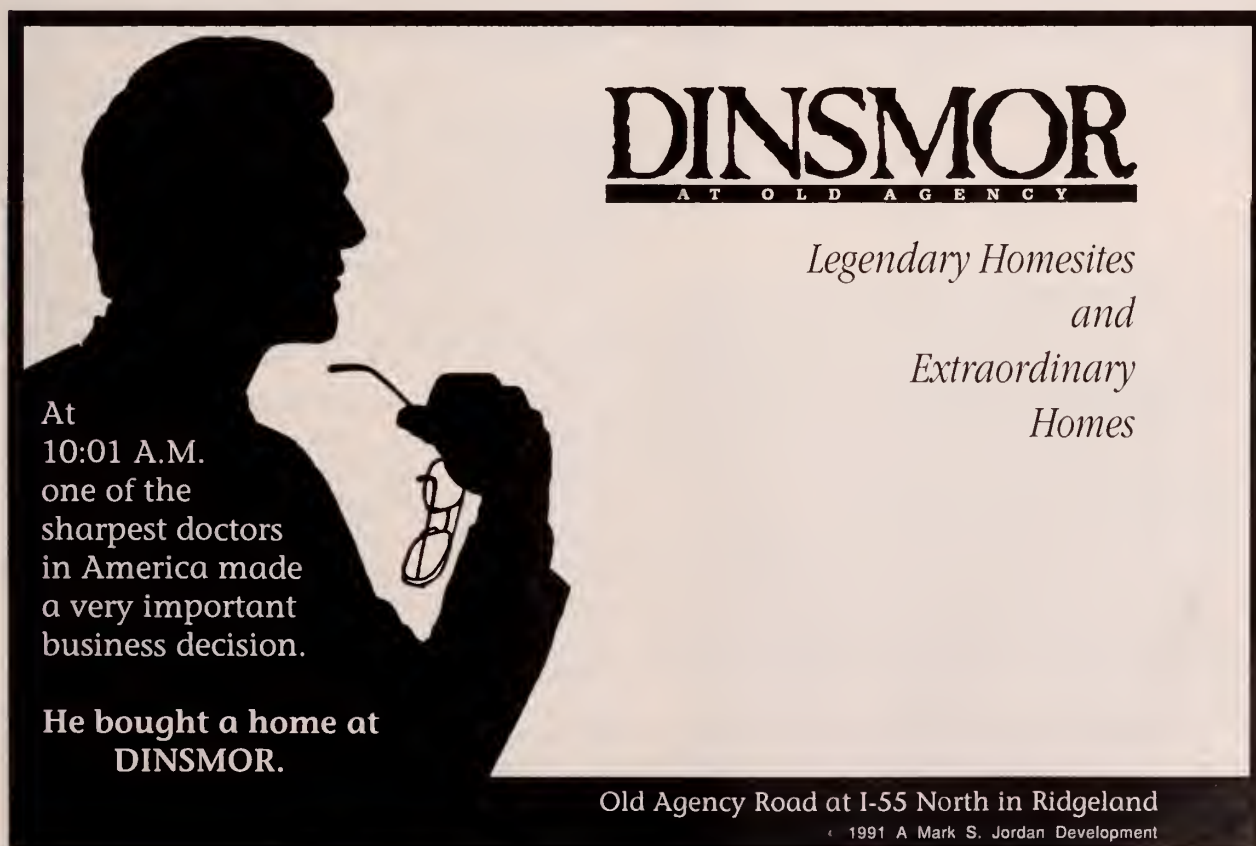
**Meador, C. Brent,** Jackson. Born Laurel, MS, October 23, 1950; MD University of Mississippi School of Medicine, Jackson, MS 1987; interned and family medicine residency University Medical Center, Jackson, MS, 1987-90; fellowship addiction medicine, Same, one year; elected by Central Medical Society.

**Nanney, James M.,** Meridian. Born Martin, TN, July 1, 1949; MD University of Tennessee College of Medicine, Memphis, TN, 1985; interned one year Bethesda Naval Hospital, Bethesda, MD; elected by East Mississippi Medical Society.

**Stevens, Thomas E., Jr.,** Jackson. Born Jackson, MS, March 10, 1960; MD University of Mississippi School of Medicine, Jackson, MS, 1988; interned and medicine residency, University Medical Center, Jackson, MS 1988-91; elected by Central Medical Society.

**Taylor, Walter T., Jr.,** Grenada. Born Jackson, MS, October 9, 1959; MD University of Mississippi School of Medicine, Jackson, MS, 1987; interned one year, St Luke's Hospital, Cleveland, OH; anesthesiology residency, University Medical Center, Jackson, MS 1988-91; elected by North Central Medical Society.

**Wilson, John W.,** Brookhaven. Born Kansas City, MO July 9, 1957; MD University of Missouri School of Medicine, Columbia, MO, 1986; general surgery residency, University of Kansas School of Medicine, Wichita, KA, 1986-91; elected by South Central Medi-



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## New Members/continued

cal Society.

**Voelker, Cynthia L.,** Jackson. Born Nwe Orleans, LA, January 7, 1959; MD Louisiana State University School of Medicine, New Orleans, LA, 1988; interned and pediatrics residency, University Medical Center, Jackson, MS 1989-91; elected by Central Medical Society.

**Weible, Nancy E.,** Hattiesburg. Born St. Francois County, Missouri, February 16, 1959; MD University of Missouri School of Medicine, Kansas City, MO 1983; family practice residency, Same, 1983-86; elected by South Mississippi Medical Society.

**Weldon, John S.,** Ocean Springs. Born Griffin, GA, February 18, 1955; MD Medical College of Georgia, School of Medicine, Augusta, GA, 1985; interned and medicine residency, USAF Medical Center, Keesler AFB, MS, 1985-87; elected by Singing River Medical Society.

**Wilson, Joseph L.,** Whitfield. Born Vicksburg, MS, January 31, 1956; MD University of Mississippi School of Medicine, Jackson, MS, 1982; interned and medicine residency University Medical Center, Jackson, MS, 1982-83 and 1984-87; elected by Central Medical Society.

### For Comments or Queries

The Editors of *Journal MSMA* invite you to comment on any material that appears in or is absent from the publication. If you have a query or comment, please sent it to: The Editor, *Journal MSMA*, PO Box 5229, Jackson, MS 39296-5229.

## Deaths

**Mullens, John R., Jr.,** West Point. Born Rockport, MS, May 11, 1920; MD University of Tennessee School of Medicine, Memphis, TN 1949; interned one year John Gaston Hospital, Memphis, TN; died June 10, 1991, age 71.

**Rosenblatt, William H.,** Jackson. Born Louisville, KY, October 10, 1914; MD University of Louisville School of Medicine, Louisville, KY, 1939; interned and medicine residency, Louisville General Hospital, Louisville, KY, 1939-41; medicine residnecy and cardiology fellowship, Philadelphia General Hospital, Philadelphia, PA, 1951-53; died June 20, 1991, age 76.

## Presidents's Page

(Continued from page 310)

each issue, but certainly our voices were heard, consensus was reached, and then the reference committee put it on paper for debate again at the House of Delegates. It is at the House of Delegates that the debate is usually limited, with each speaker allowed only two, or at the most three minutes, to attempt to sway the House to vote their particular way. Again, the debate was spirited with the House being in session on Tuesday, Wednesday and Thursday. When the final votes are taken you can be assured that each delegation, each person, has had an opportunity to speak his mind, that each of the several sides of the debate have been heard, and that the House of Delegates has reached a consensus on the policy that is going to shape AMA's future. I have been extremely impressed with the work of the House.

The same opportunities are afforded to us in Mississippi. We are still at the very cutting edge of health policy making in this State. MSMA is considered the leader in the field of medicine in this State and is called upon to assist in the policy making. However, MSMA is only as strong as you individually. So, I would encourage you to think about the opportunities that we have in Mississippi to forge ahead, to change policy, to make policy, to shape our own future regarding health care in this State. Step forward when you are called. Volunteer your services and your time. Certainly, it does cost you of your time and yourself, but we are reminded there is no such thing as a free lunch ..... someone is going to pay.



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## Personals

**Kathryn Akin** has associated with David Reeves of Long Beach in the practice of Pediatrics, at the Children's Clinic, 20091 Pineville Road, Long Beach.

**Myron Lamar Arrington** of Prentiss has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

**Kenneth R. Barraza** has associated with Jackson Plastic Surgery Clinic, P.A. for the practice of plastic and reconstructive surgery.

**John Malcom Beaman** of Richton has completed continuing medical education hours to retain active membership in the American Academy of Family Physicians.

**Bertha Blanchard** has associated with George Wilkerson of Hattiesburg in the practice of neurology.

**Leonard H. Brandon** of Starkville recently completed continuing education requirements to retain his active membership in the American Academy of Family Physicians.

**Charles R. Brent** has associated with The Hattiesburg Clinic in the practice of neurosurgery.

**D. Timothy Cannon** of Jackson has associated with Jackson Pulmonary Associates, PA for the practice of Pulmonary and Critical Care Medicine.

**Richard C. Carter, Jr.**, of Kosciusko has completed continuing

medical education requirements to retain active membership in the American Academy of Family Physicians.

**Rick Cavett** of Baptist Medical Center in Jackson has completed the examination for added certification in cytopathology offered by the American board of Pathology on June 4.

**Cary A. Cirilli**, of Jackson has associated with Radiological Group, PA for the practice of diagnostic radiology.

**Chuck Coleman** has associated with The Mississippi Neuropsychiatric Clinic for the practice of Adult, Child, and Adolescent Psychiatry.

**George C. Furr** of Clarksdale has received a letter of commendation from U.S. Surgeon General Antonia C. Novello for his work on behalf of agricultural safety and health.

**C. David Finch** of Jackson has associated with The Vicksburg Clinic and The Street Clinic in the practice of nephrology as a consulting physician.

**Gardner L. Fletcher** has associated with The Diagnostic Chest Clinic, Hattiesburg in the practice of pulmonary medicine, specializing in chest, lung and sheet disorders.

**Creed Fox** of Hattiesburg announces the opening of The Gastroenterology Clinic at 103 Asbury Circle for the practice of gastroenterology.

**Walter D. Gunn** of Quitman has completed continuing medical education requirements to retain active membership in the American Acad-

emy of Family Physicians.

**Brenda P. Hines** has associated with David Guilder, William P. Thompson and Forster G. Ruhl, Jr. in the practice of family medicine at The Yazoo City Medical Clinic.

**Jerome B. Hirsch, Jr.**, of Greenville has been selected as a member in Who's Who in Health and Medical Services.

**Rebecca Hodges** of Kilmichael has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

**Word Johnston** of Mt. Olive has completed medical education requirements to retain active membership in the American Academy of Family Physicians.

**Douglas C. Leavengood** of Biloxi announces the opening of his new independent practice, Gulf Coast Asthma & Allergy Clinic at 2432 Pass Road, Biloxi.

**Nelson K. Little** has associated with The Cardiology Group of Mississippi, P.A., Jackson for the practice of cardiology.

**Luis Felipe Mosquera** announces the relocation of his practice in general surgery, oncology, endoscopy, laparoscopy to Specialists Clinic, 522 Grand Avenue, Yazoo City.

**Mitchell J. Myers**, of Jackson has associated with The Vicksburg Clinic and The Street Clinic in the practice of neurology as a consulting physician.

**William Edwin Powell** of Way-

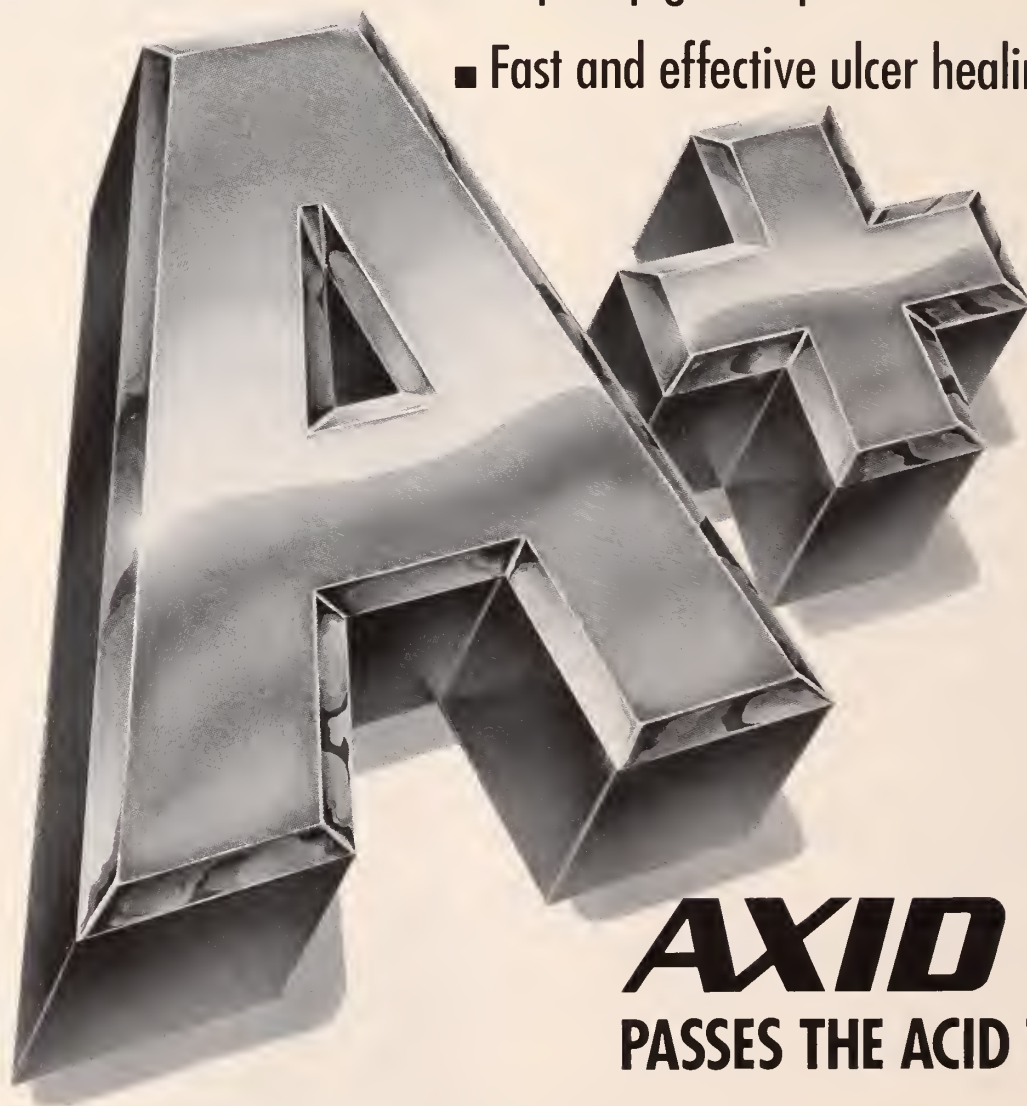


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**Precautions:** *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

**Laboratory Tests**—False-positive tests for urobilinogen with Multistix® may occur during therapy.

**Drug Interactions**—No interactions have been observed with theophylline, chloridazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

**Carcinogenesis, Mutagenesis, Impairment of Fertility**—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, prenatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

**Pregnancy—Teratogenic Effects—Pregnancy Category C**—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers**—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

**Pediatric Use**—Safety and effectiveness in children have not been established.

**Use in Elderly Patients**—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

**Hepatic**—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) of SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

**Cardiovascular**—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

**CNS**—Rare cases of reversible mental confusion have been reported.

**Endocrine**—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

**Hematologic**—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H<sub>2</sub>-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

**Integumental**—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

**Hypersensitivity**—As with other H<sub>2</sub>-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

**Other**—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

**Overdosage:** Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

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### References

1. Data on file, Lilly Research Laboratories
2. *Scand J Gastroenterol* 1987;22(suppl 136):61-70
3. *Scand J Gastroenterol* 1987;22(suppl 136):47-55
4. *Am J Gastroenterol* 1989;84:769-774

NZ-2943-B-149347

Additional information available to the profession on request.

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# Physicians' Recognition Award

Seventeen MSMA members were named recipients of the AMA Physicians' Recognition Award in May and June 1991. This award is presented by the American Medical Association to Physicians who have voluntarily completed the specified number of continuing education hours.

These seventeen individuals are presented below by medical society.

## Central

Billy Wayne Long, MD

## Coast Counties

Sidney Albert Chevis, MD

## East Mississippi

John K. Henry, MD

## North Mississippi

George Edward Farrell, MD

Ralph Doyle Ford, MD

## Northeast Mississippi

Osvaldo Hans, MD

K. Scott Segars, MD

Kelly S. Segars, MD

Willie Lee Wells, MD

## Prairie

Leonard H. Brandon, MD

## Singing River

Paul Harold Moore, MD

## South Mississippi

Myron Lamar Arrington, MD

Ralph Morgan Fortenberry, MD

David Ira Hirsch, MD

Peeler Grayson Lacey, MD

Arthur E. Wood, MD

## West Mississippi

Clayton Nolen Hudson, MD





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## **Personals/continued**

nesboro has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Gerald M. Rankin of Vicksburg announces the relocation of his practice to Vicksburg OB/Gyn Associates, Inc. 1203 Mission Park Drive, Vicksburg.

Sara Schrader of Tunica has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Dwalia S. South of Ripley has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Gene T. Walker of Vicksburg announces the relocation of his practice to Vicksburg OB/Gyn Associates, Inc. 1203 Mission Park Drive, Vicksburg.

Brent R. Wheeler has associated with Surgery Clinic of Hattiesburg, PA, in the practice of general, thoracic, vascular, and laser surgery.

Arthur Eugene Wood of Waynesboro has completed continuing education requirements to retain active membership in the American Academy of Family Physicians.

Items for the

## ***Personals Column***

may be sent to the Editor,  
Journal MSMA, PO Box 5229,  
Jackson, MS 39296-5229.





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The Mississippi DDS is recruiting physicians for part-time employment in the Jackson Office. Job requires review of medical reports for determination of benefit eligibility under Social Security criteria. Board certified/eligible psychiatrists, pediatricians, pulmonologists, cardiologist and neurologists are needed. Flexible work schedules. For information contact Deborah Warriner at 601-923-2153.



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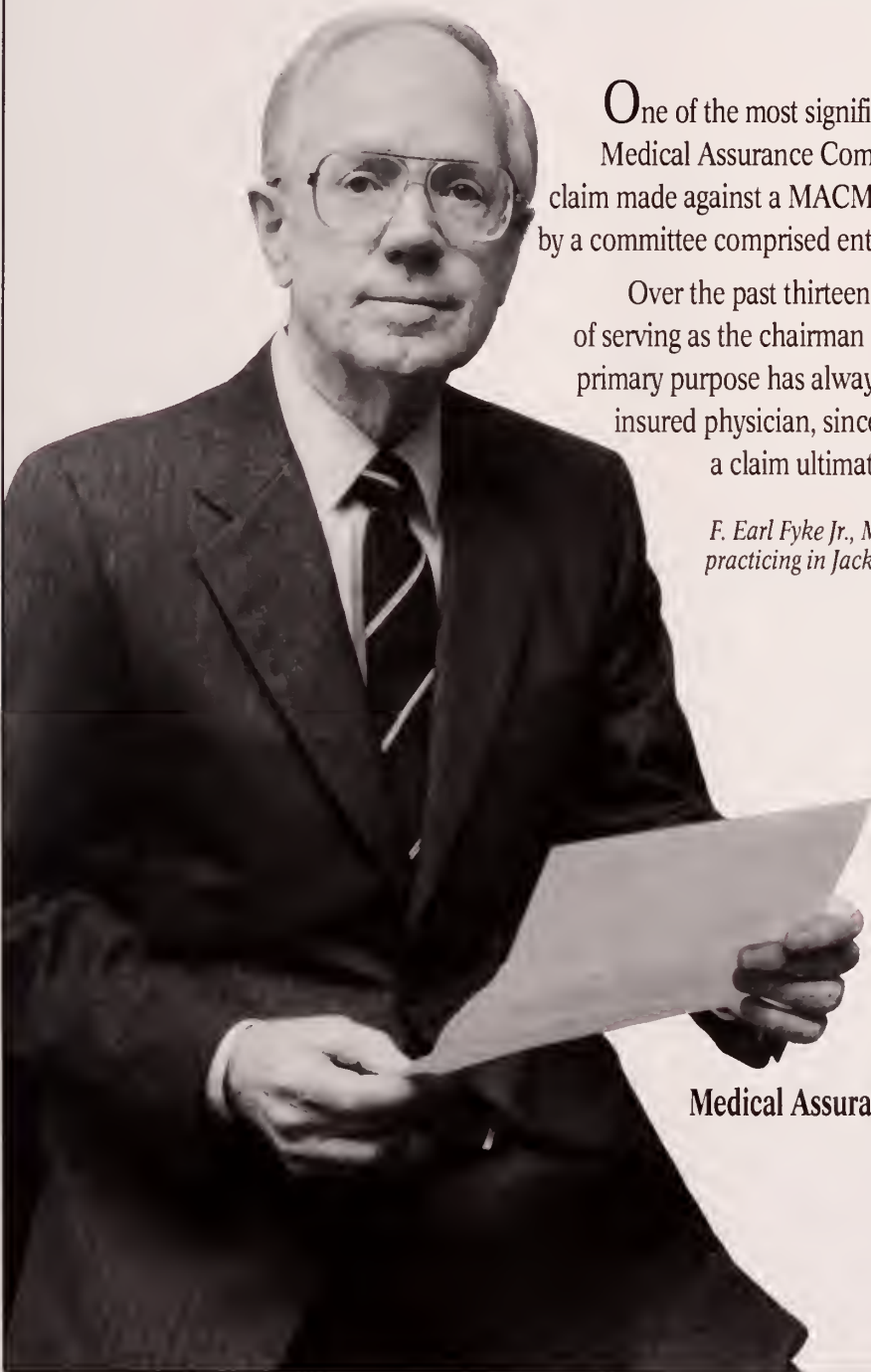
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# JOURNAL

OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

SEPTEMBER

1991

## WOMEN IN MEDICINE







*They took little sticks and touched me. It felt like a dream.*



"A dream" is how Sandi Fornea described the nightmare she thought she'd never wake up from. A cheerleader and campus beauty who seemed to be living a charmed life, she felt her body gradually go numb from a rare virus. The way Sandi saw it, her paralysis had changed her whole life for the worse. And that's when the staff at

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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 9

September 1991

Dear Doctor:

Mississippi's overall infant mortality rate rose slightly to 12.1 in 1990, announced State Health Officer Dr. Alton B. Cobb. The small increase means that 23 more Mississippi babies died last year than would have at 1989 rates. Distressingly, the disparity between white and non-white infant mortality rates also increased.

Infant mortality rates -- deaths of babies under one year of age per 1,000 live births -- are a critical indicator of the general health of a community. The overall 1990 rate shows an increase from 11.6 to 12.1. The non-white rate rose from 14.7 to 15.9; but the white infant mortality rate dipped slightly from 8.7 to 8.6. Dr. Cobb emphasized that this increase in the non-white rate follows an impressive decline from 16.1 in 1988 to 14.6 in 1989.

"We continue our work to decrease the difference in infant mortality rates for white and non-white babies in this state and nation," Dr. Cobb said, "I'm disheartened to see our progress slowed this past year. "The disparity between white and non-white rates is a national problem which is related to a very high rate of low-birthweight births among black women." Statewide, infant mortality rates for non-whites have declined dramatically over the past 10 years. In 1980, the non-white rate was 23.3; by 1989 the rate had dipped to 14.7.

The 1989 overall rate of 11.6 was the lowest in Mississippi history. The 1990 rate -- while an increase -- is still lower than the 1988 rate of 12.3 and significantly lower than the rate of 17 in 1980. MSDH statisticians don't see a trend in the increase in 1990, but Dr. Cobb warns the rise "could signal a reversal of our downward trend. Early and high quality prenatal care is the most important preventive measure for infant mortality." Almost 50 percent of pregnant women in Mississippi receive prenatal care at county health department clinics.

"We're doing everything we can with the resources at hand," Dr. Cobb said. "But, because of staffing and financial shortages, we're not reaching everyone with prenatal care as soon as we should. Our waiting times for family planning and prenatal visits are getting longer. We need additional nurses and other staff in our local health departments to serve patients."

Dr. Cobb said and increase in the numbers of births of very low-birthweight babies -- those weighing less than 1,000 grams or two pounds, three ounces -- contributed to the infant mortality rise in 1990. "Increased technology in our specialized hospitals frequently gives these babies a better chance of survival than was true in the past," Dr. Cobb said. "But it also raises the number of births of these very small babies without guaranteeing their ability to thrive. The risks of dying within their first year of life remains high for these very small babies. "We have to expect that as the numbers of very tiny babies increases we will see a rise in our infant mortality rate," he said. "Put simply, it means more babies are born with a high likelihood of dying."

Low-birthweight results from a variety of physical and socioeconomic factors. Among the things which increase the chance of having very small babies are use of tobacco, alcohol, and illegal drugs. To produce a healthy baby, mothers should be in the best possible health before becoming pregnant and maintain their health throughout pregnancy. Family planning to space pregnancies and good prenatal care are our best prevention against the birth of very small babies. The WIC Program provides important nutrition during pregnancy. "Since low-birthweight is much more of a problem for black babies, it is specially important that all black women seek prenatal care early, that they enroll in WIC, quit smoking, and stop using any alcoholic beverage throughout their pregnancy," the State Health Officer said.





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# Dateline

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Journal of the Mississippi State Medical Association  
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## **The Patient Self-Determination Act**

Pascagoula, MS - Along with the routine questions about insurance coverage and treatment authorizations, patients checking into the hospital will soon be asked a life-and-death question: How far do they want doctors to go in keeping them alive if they can no longer decide for themselves?

Beginning Dec. 1, federal law will require all hospitals, nursing homes and other health care facilities to inform patients of their right to refuse or accept medical treatment. In addition, patients will be told that they have the right to state in advance the kinds of life-prolonging treatment they will undergo or to designate someone to make decisions for them if they are incapacitated.

The Patient Self Determination Act, passed by Congress last year, is intended to get patients to act on an issue that has been much debated in recent years amid widely publicized cases of vegetative patients being kept alive by life-support equipment.

## **State Law Allows AIDS Tests**

Meridian, MS - Some emergency room patients could find themselves footing the bill for an AIDS test under a new state law. A law passed by the 1991 Legislature allows hospitals to test patients for AIDS -- even without their consent -- solely on the basis of their appearance.

## **Authorities to Fight Rising TB Cases in State**

Jackson, MS - Since the mid-1980's, the incidence of tuberculosis (TB) in Mississippi and across the nation has been on the rise, according to a report by the Mississippi State Department of Health. Because of a steadily declining trend during the '60s and '70s, it had been predicted that the disease would be nearly eliminated by the year 2000. However, the rise in cases in recent years is causing health experts to move that prediction up to the year 2010.

Dr. Dixie E. Snider, who directs the Centers for Disease Control TB control division, says, 1990 was a bad year, with possibly the worst TB increase on record, according to the report.

In early January, a massive campaign to eliminate TB, "Stop TB, Prevent It!", " was launched in Mississippi. The campaign includes heightening TB awareness and providing screening and therapy. A TB Elimination Advisory Committee was formed and staffed by 21 health care professionals and other interested citizens. The TB elimination campaign also enlisted the help of mass media to get the word out.

Perhaps the highest incidence of tuberculosis in Mississippi is among the state's prison population. Department of Health statistics show that among the general population, the case rate is 14.1 per 100,000, compared to 66 per 100,000 for prisoners. According to Medical Director of Mississippi's TB Control Program, State Department of Health, Dr. Robert Hotchkiss, a January screening of 6,400 inmates found three prisoners with active TB and "discovered incidence of spread of infection, with over 200 Parchman inmates, and 31 at the South Mississippi facility newly infected." As a result, some 300 inmates are now taking preventive therapy for TB infection.





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# Intraosseous Administration of Digoxin: Same-Dose Comparison with Intravenous Administration in the Dog Model

CHARLES V. POLLACK, Jr., MA, MD  
EMILY S. PENDER, MD

Recent years have seen the revival in emergency pediatrics of an old technique -- intraosseous (IO) infusion. First described in the 1920's<sup>1</sup> and widely used in the two decades between 1940 and 1960,<sup>2,4</sup> the intraosseous route of fluid delivery fell out of favor with the development of plastic catheters for peripheral venous cannulation. However, with advances in cardiopulmonary resuscitation came a renewed interest in rapid venous access for fluid and drug administration, and, thus, a new look at the intraosseous route.<sup>5-9</sup>

A number of studies have examined different aspects of IO infusion, including achievable flow rates,<sup>10</sup> ease of placement,<sup>11-13</sup> and prehospital use.<sup>11,12,14</sup> In addition, there have been numerous clinical reports of intraosseous infusion being used in such situations as successful cardiopulmonary resuscitation,<sup>5,6,9,15</sup> treatment of status epilepticus,<sup>16,17</sup> and anesthesia induction.<sup>18,19</sup> Reported complications have been infrequent when intraosseous lines are properly placed and removed as soon as more conventional access has been established.<sup>5</sup> Thus, evidence at this time indicates that intraosseous infusion is a rapid, safe, effective and practical means of establishing vascular access and of initiating cardiovascular resuscitation in pediatric emergency situations.

Intraosseous access has become the method of choice for venous access in critically ill and injured children when more traditional methods are not immediately available. However, there is a paucity of information concerning drug levels achieved via the intraosseous route. We report initial data on the comparison of serum digoxin levels after administration of the drug to dogs through both the intraosseous and intravenous routes. These data indicate that intraosseous infusion of digoxin results in similar serum levels to those attained after IV administration, and may therefore afford a reliable means of initial digitalization.

Despite the increased interest in intraosseous infusion, there remains little controlled information on its use for drug administration. There have been few studies in which drug levels have been measured and compared to other parenteral routes of administration; those studies that have been reported, however,



have yielded favorable results for the intraosseous infusion of emergency drugs.<sup>13,19-22</sup> Still, more study is required to reassure the clinician who is utilizing this method of resuscitation and drug delivery that it is reliable and efficacious.

Primary cardiac emergencies, while uncommon in childhood, may present with a need for immediate treatment of supraventricular tachydysrhythmias or congestive heart failure when traditional venous access is not readily available, due to a hypodynamic cardiac state. The intraosseous route would appear to offer an excellent alternative for the initial stabilization of these patients. However, there have been no reports comparing intravenous (IV) and intraosseous administration of digoxin.

In order to determine whether digoxin can be effectively administered via the intraosseous route, we undertook a preliminary study in the dog model to compare serum levels of digoxin attained via the IO and IV routes.

## Methods

This protocol was approved by the Institutional Animal Care and Use Committee of the University of Mississippi Medical Center.

Three common mongrel dogs, weighing between 20 and 24 kg, each received an intravenous injection of pentobarbital, 35 mg/kg, and subcutaneous injections of acetylpromazine, 10 mg, and atropine, 7.5 mg. Anesthesia was subsequently supplemented, as required, with smaller doses of pentobarbital. The animals were endotracheally intubated, but did not require ventilation.

Each animal received a bolus dose of digoxin, 25 ug/kg, on each of two separate occasions, by either the intravenous or the tibial intraosseous route. The sequence of the routes was randomized among the animals. Each animal therefore served as its own control.

For intraosseous administration, the skin overlying the proximal tibia was prepped with povidone-iodine, and a 15-gauge Jamshidi(R) bone marrow needle was introduced perpendicularly into the flat anteromedial aspect of the bone, one to two centimeters below the tibial tubercle. Intramedullary placement was confirmed by aspiration of blood and marrow contents, and 10 cc of normal saline was injected to clear the catheter. Initial placement was successful in all cases. Each dose was followed by a 10 cc bolus injection of normal saline, after which the IO needle was removed and digital pressure was held over the site through

sterile gauze for at least five minutes. Intravenous dosing, via the external jugular vein, was likewise followed by a 10 cc flush. A week-long washout period was allowed between IV and IO administration.

Blood samples were drawn from a peripheral vein at 15, 30, 45, 60, and 90 minutes after injection, and assay for the serum digoxin level was performed on each specimen by an affinity column mediated immunoassay technique (DuPont DGN) in our medical center laboratory.

Serum levels at each time interval achieved by both routes of administration were averaged and compared using a paired t-test. Significance was determined by a  $p < 0.05$ .

## Results

Figure 1 shows the average serum levels ( $\pm$  standard deviation) of digoxin achieved by equivalent IO and IV administration. Samples drawn on the second drug administration day prior to redosing confirmed washout of the preceding dose. The drug levels obtained at each sampling interval were somewhat lower after IO administration than after IV dosing, but consistently paralleled the IV levels, indicating a trend toward similar serum half-lives. Differences were not statistically significant.

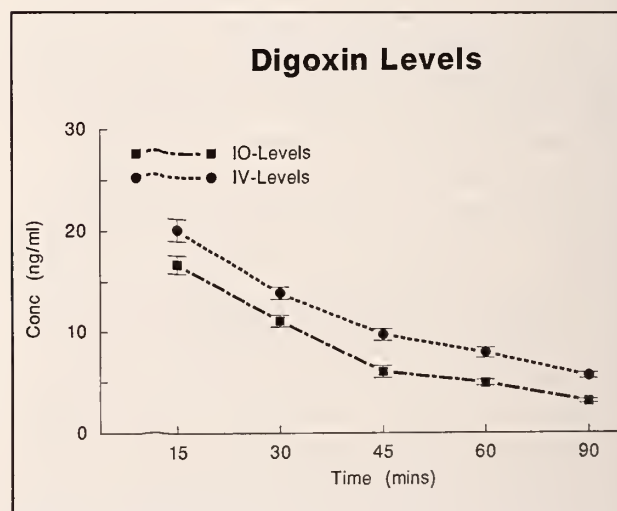


Figure 1: Graph of average ( $\pm$  SD) serum digoxin levels (ng/ml) after IO and IV administration at time zero. Levels are not significantly different.

## Discussion

The primary causes of congestive heart failure in in-



fancy and childhood are congenital heart disease (including such disorders as aortic stenosis, aortic coarctation, large left-to-right shunts, aortic insufficiency, anomalous coronary artery) and rhythm disturbances (such as complete heart block and supraventricular tachycardia, which may result from anatomic anomaly).<sup>23</sup> In addition, there are a number of acquired disorders, including viral infections, collagen vascular diseases, rheumatic heart disease, sepsis, electrolyte disturbances, chronic anemia, and certain poisonings (e.g., tricyclic antidepressant overdose), that may present primarily with symptoms of congestive heart failure.<sup>23,24</sup>

Both congenital and acquired disease commonly present with an acute onset of severe symptoms requiring immediate intervention. Traditionally, digitalization has been included in the initial management of these patients. Unfortunately, IV access may be difficult if not impossible to establish in a timely manner in the critically ill, hemodynamically compromised infant or child.

There is one clinical report in the literature on the IO administration of digoxin, in which the patient was noted to become effectively digitalized in the expected time interval after dosing via the marrow space of the iliac crest.<sup>25</sup> However, there have been no controlled studies regarding the IO administration of digoxin.

The current data indicate that, although serum levels are somewhat lower after IO administration as compared to IV administration, intraosseous infusion of digoxin in the dog model results in similar distribution and serum levels. While these data do not reflect clinical effect, the potential for digoxin toxicity should probably preclude the use of an empirically larger dose of digoxin IO in the emergent situation, particularly since the differences in this preliminary study were not significant. The emergency physician should monitor the effects of the IO bolus and give supplemental doses as guided by clinical response and serum levels.

## Conclusion

Preliminary data from the dog model are presented, demonstrating the achievement of serum levels of digoxin when administered by the IO route that are similar to those achieved after IV injection. While larger studies should be carried out, it appears that the standard parenteral loading dose of 25 ug/kg is reasonable for emergency intraosseous administration. In the scenario of a pediatric patient in a depressed cardiovascular status due to congestive heart failure

and/or unstable supraventricular tachydysrhythmia, these data indicate that digitalization may not have to be delayed until traditional IV access is attained.

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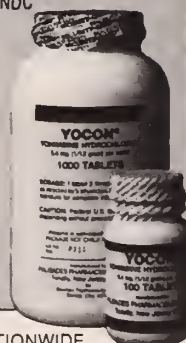
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# Current Therapy of Hand Burn Injuries

GARY W. COX, MD  
JOHN A. GRISWOLD, MD

The hand is the most frequent site on the body to suffer thermal injury.<sup>1</sup> Hand burns can result in significant and permanent disabilities, often with devastating consequences. It is incumbent upon physicians to develop a careful and effective method of evaluation and treatment for these types of injuries in order to prevent or limit any permanent disability and return the patient to his or her preburn lifestyle as quickly as possible. This report presents an illustrative case of an isolated dorsal hand burn and discusses the diagnosis and treatment approach now used for such a burn wound at the University of Mississippi Medical Center.

## Case Report

A 31 year old right-handed male roofer was on a job site when he fell, his right hand landing in bucket of hot roofing tar. The tar was cooled immediately by immersion in water and he was taken to the emergency room at the University of Mississippi Medical Center. He was found to be in stable condition with a markedly edematous right hand and digits, all covered with a thick layer of tar. He exhibited good capillary refill and minimal range of motion in his digits. The patient was admitted to the hospital. His hand was elevated and bacitracin ointment was applied to the wound three times daily to dissolve the tar. About 72 hours postburn, most of the tar had been chemically debrided and it was apparent that the patient had suffered a deep partial thickness burn with a few areas of full thickness injury (see Figure 1). The injured area covered the entire dorsum of his hand and the dorsal surface of the digits, sparing only the skin over the distal interphalangeal joints and finger tips. The palmar skin was not involved. In the operating room the burn wound was excised tangentially down



*Figure 1 - Full thickness and deep partial thickness tar burn of the dorsal hand and digits.*

to bleeding, viable tissue. The 300 sq. cm wound was closed with a sheet (nonmeshed) graft of split thickness skin. No dressings were applied over the graft. The hand was immobilized in a Ukulele splint and closely observed for 7 days (see Figure 2). He had 100% survival of graft. The patient was then placed on an aggressive physical therapy program and discharged home on postoperative day 9. He continued physical therapy after discharge and was fitted for a Jobst compression glove. He returned to work 45 days after his injury and has complete use and function of his hand with an excellent cosmetic result (see Figures 3-4).

## Discussion

Although burns isolated to the skin of the hand comprise less than 5% of the total body surface area, they can result in severe and permanent morbidity.<sup>2</sup> The many important and complex tasks that the hands perform mandate that the evaluation and treatment of





*Figure 2 - Appearance of hand immediately after burn wound excision and sheet grafting. The grafts remain exposed and the hand is immobilized in the Ukulele splint for one week.*



*Figure 3 - Appearance of hand two months postoperatively. Full extension is possible in all joints.*

hand burn injuries be meticulous and no injury of the hand be taken lightly. One should also remember that other injuries often accompany burns and never fail to evaluate the patient as a whole. This discussion is limited to hand burn injuries and specifically those most commonly seen, involving the dorsal surface.



*Figure 4 - View of hand in flexion at two months postoperatively.*

Initial evaluation requires a careful history, including the time, mechanism, and circumstances of the injury, as well as any prior treatment. The initial treatment of tar burns, as in the case above, calls for immediate cooling of the injured parts with cool water. One should be careful not to peel off the tar because it is usually firmly adherent to the underlying skin and the injury may actually be deepened by tearing or removing uninjured tissue at the base of the wound. Hand injuries also require a knowledge of the patient's occupation and whether he or she is right- or left-handed.

Physical examination should first detail the injured areas. Few burns of the hand will involve the palmar skin because it is relatively thick and because of reflexive first clinching. One should particularly note the involvement of joint creases that may result in contracture formation. Although escharotomy to relieve elevated tissue pressure is usually not indicated for isolated hand burns, each digit must be carefully evaluated to insure that circulation is adequate.

After the nature and extent of the burn have been determined, a closer examination of the wounds will help to ascertain the depth of injury. It is convenient to think of burn depth as superficial (first degree), superficial partial thickness (superficial second-degree), deep partial thickness (deep second-degree), or full thickness (third-degree).

Superficial partial thickness burns involve only the epidermis and a small portion of the dermis, with sparing of the dermal papillae. These wounds appear pink or bright red and blanch when pressure is applied. The wound is usually moist, and blisters may or may not be present. These burns are extremely sensitive to light touch and painful due to viable nerve endings within the dermis.<sup>3</sup> Burns at this depth heal



within 3 weeks without significant functional or cosmetic deficits.

Deep partial thickness burns produce extensive damage to the papillary dermis, with few remaining viable epithelial cells for healing. Because the papillary vascular plexus is involved, the wound usually appears white, dry and edematous. Blisters are usually present and these wounds are often sensitive only to pressure.<sup>3</sup> These injuries, if allowed to heal primarily, usually take longer than 3 weeks to heal often ending in significant functional and cosmetic problems.

Full thickness injuries are usually recognized by their white or charred appearance and the dry leather-like eschar that forms. The involved area is usually depressed, although massive edema may surround the burn wound.<sup>3</sup> One common exception is that of full thickness burns produced by immersion or scalding. These wounds often appear bright red, making accurate determination of depth difficult.<sup>3</sup>

It should be noted that a single burn wound is usually not homogenous and often contains varying depths of injury. Most importantly, the depth of involvement is likely to become more extensive during the first 48 hours post burn, and a final determination of the depth of injury is often not possible prior to that time.

Estimating the depth of the burn is probably the most difficult task in evaluating burn injuries. It is important to differentiate burns that would heal within 3 weeks (superficial partial thickness) from deep dermal burns that take longer than 3 weeks to reepithelialize. The latter injuries are best treated with early excision and grafting.<sup>4</sup>

Hand burns that are clearly superficial partial thickness or less can be expected to heal within 21 days by reepithelialization from the viable dermal cells.<sup>4</sup> These wounds are best treated with gauze dressings. Costly topical antibiotics are generally not indicated in such wounds.<sup>5</sup> Burns of this type can be expected to heal relatively quickly with a minimal incidence of hypertrophic scarring, good cosmesis, and no long term functional impairment provided vigorous range of motion exercises are performed.<sup>6</sup>

Janzekovic began to popularize early excision and grafting for burn wounds in the early 1970's.<sup>7</sup> Since that time, many reports have detailed the superior results achieved with early excision and grafting of deep partial and full thickness burn injuries of the hand.<sup>6</sup> Burn wounds of this nature can be expected to heal more quickly and produce less hypertrophic scarring with less chance of functional impairment when com-

pletely excised and closed with a split thickness skin graft early in the postburn period.<sup>6</sup> In addition, the cosmetic results are superior with excision and sheet grafting of deep partial thickness or full thickness wounds.

We and others have found that 3 weeks is a good cut-off time to allow for spontaneous healing.<sup>4</sup> Hand burns that can be expected to heal within this period will give excellent results if treated with local wound care. Wounds that appear to be deep dermal or full thickness can be expected to require more than 3 weeks to heal and are best treated operatively. These patients can return to work or school more quickly, with less chance for long term impairment, if they undergo early excision and grafting (such as the case report above).<sup>4</sup>

Our operative approach entails the use of sheet grafts for closure of hand burns because the cosmetic results are superior to meshed grafts and the dorsal hand is a cosmetically important area. We apply no dressings over the grafts, and place a Ukulele splint for 7 days. This type of splinting assures a secure environment to allow for graft "take" and permits inspection of the graft at any time. In addition, the splint does allow some limited range of motion in the patients digits, which may help to prevent joint stiffness in the postoperative period.

As is the case with any burn of the hand, an aggressive physical therapy program is necessary to prevent joint stiffness and assure complete functional recovery. We begin such a program on the seventh postoperative day, at which time graft survival is not threatened by activity. This program, which includes the use of CPM machines specifically made for digit and wrist motion, should be continued after the patient is discharged. Most patients are able to continue the exercises without professional supervision.

Following discharge we continue to monitor the patient frequently for alterations in range of motion and contracture development. About 2 weeks postoperatively, patients are fitted with a compression glove that aids in the prevention of hypertrophic scarring.

In summary, hand burns that will heal completely within 3 weeks are treated with local wound care, which produces excellent results and minimal scarring. Optimum results with more severe burns are achieved with early burn wound excision and sheet grafting, followed by a vigorous range of motion program. Such an approach will yield excellent cosmesis, lessen the incidence of functional deficits and the need for future reconstructive procedures, and allow a more timely return to previous lifestyle.



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*Dr. Cox and Dr. Griswold are from the Department of Surgery, University of Mississippi Medical Center.*



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## Women in Medicine

September has been designated by the AMA as "Women in Medicine" Month. This is the second time the AMA has celebrated women physicians' history and accomplishments.

The number of women in Medicine has grown dramatically.

U.S. Physicians	1970	1980	1990
Total	334,028	467,679	600,789
Male	308,627	413,395	502,343
Female	25,401	54,284	98,446

At this rate by the year 2010, 30% of physicians will be women.

### WOMEN IN MEDICAL SCHOOL

In the fall of 1989, women comprised over 38% of students entering American medical schools, compared to only 9% twenty years earlier.

### WOMEN IN RESIDENCY TRAINING

According to the 1989 *JAMA* medical education issue, approximately 85,000 resident physicians were on duty as of September 1989. Women constituted almost 29%. More than one third of women residents were training in internal medicine or pediatrics. Another 28% were in obstetrics/gynecology, family practice, or psychiatry.

### WOMEN IN MEDICAL PRACTICE

The total number of women physicians more than doubled between 1970-1980; by 1989, the number had increased nearly 288% to approximately 98,500 women physicians, or 16.4% of all physicians.

**Specialty** - In 1967, only seven specialties had more than 1,000 women physicians. By 1989, fifteen specialties had more than 1,000 women physicians. However, all seven of the specialties having the most women in 1967 remained the same in 1989 -- (in descending order) Internal Medicine, Pediatrics, General Practice, Psychiatry, OB/GYN, Anesthesiology,

and Pathology. In 1989, these specialties represented 67% of the total female physician population. Women are about three times as likely as men to be pediatricians and less than half as likely to be in general surgery or a surgical subspecialty.

**Activity** - In comparison to 1970, women physicians in 1989 were more likely to be in office-based practices (46% of all women) although they still represented just 12.9% of all office-based physicians.

In Academic Medicine, the percentage of women medical school graduates joining medical school faculties has been consistently higher than that of men. However, in 1989, although 20% of full-time faculty were women, only three of U.S. medical schools deans were women and 9% were professors.

Female physicians remain significantly less likely to be self-employed than male physicians, and are twice as likely to be employees.

**Age** - Female physicians are younger, on average, than male physicians. In 1989, almost 73% of female physicians were under age 45, with the largest number being between 30 and 39 years old.

**Work Hours** - Female physicians work about 10% fewer hours per year than male physicians and they spend about five to six fewer hours per week on practice activities. The average number of total weekly patient visits for female physicians is also lower than for male physicians.

**Income** - In 1988, female physicians earned 63% of the male mean annual net income amount, although the growth rate for females since 1981 was higher. Contributing factors in the lower incomes for women physicians are that women are over-represented in the lower-paid specialties, are more often in salaried positions, work fewer hours, see fewer patients and are younger.

According to AMA statistics, Mississippi has the highest percentage of "Women in Organized Medicine" with an average of 54.9% in 1990 compared to the national 1990 average of 32.5%.

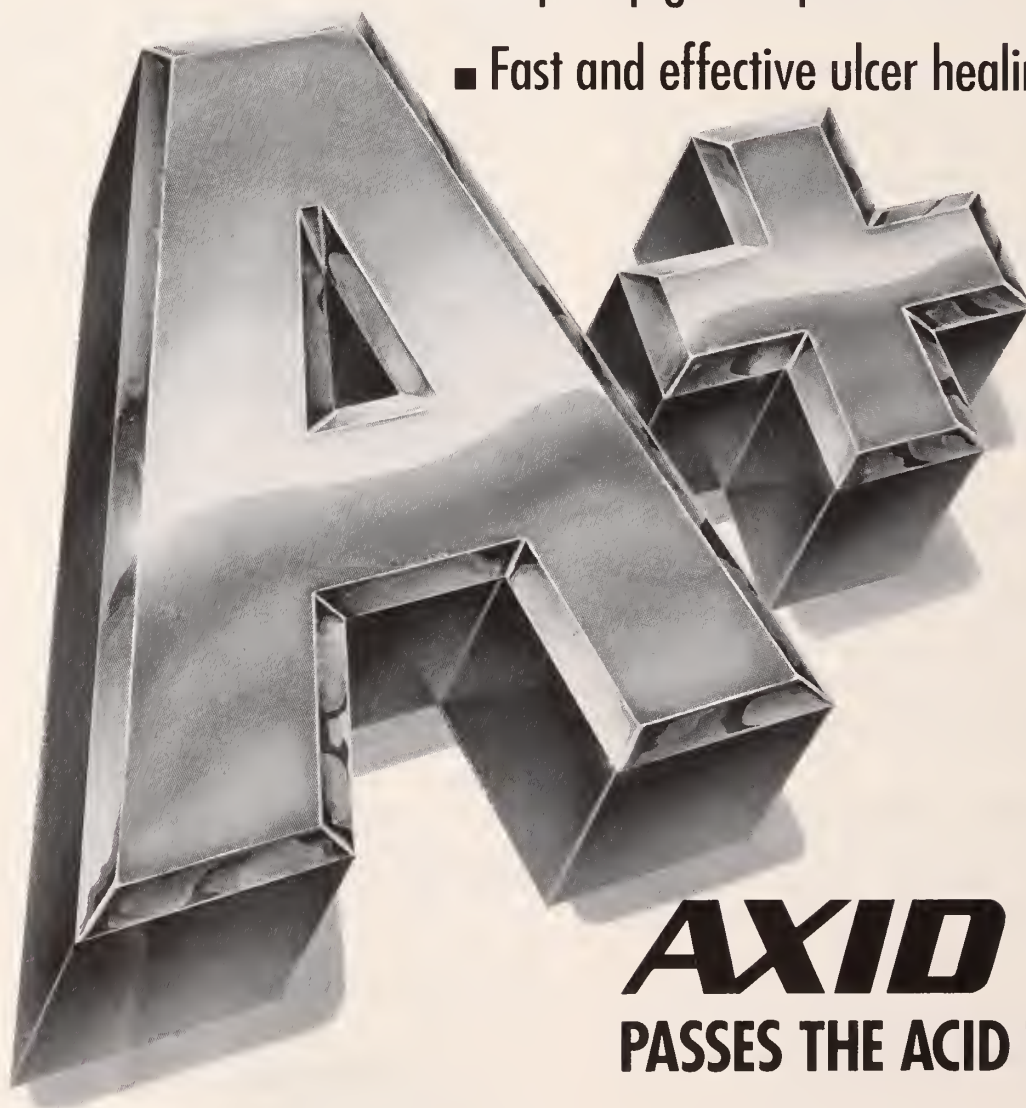


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**Contraindications:** Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H<sub>2</sub>-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H<sub>2</sub>-receptor antagonists.

**Precautions:** General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

**Laboratory Tests**—False-positive tests for urobilinogen with Multistix® may occur during therapy.

**Drug Interactions**—No interactions have been observed with theophylline, chlorazepate, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

**Carcinogenesis, Mutagenesis, Impairment of Fertility**—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, prenatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

**Pregnancy—Teratogenic Effects—Pregnancy Category C**—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers**—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

**Pediatric Use**—Safety and effectiveness in children have not been established.

**Use in Elderly Patients**—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

**Hepatic**—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>5.0 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

**Cardiovascular**—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

**CNS**—Rare cases of reversible mental confusion have been reported.

**Endocrine**—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

**Hematologic**—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H<sub>2</sub>-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

**Integumental**—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

**Hypersensitivity**—As with other H<sub>2</sub>-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

**Other**—Hypernatremia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

**Overdosage:** Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

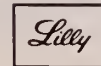
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## The President's Page

JAMES C. WAITES, MD

### A "REAL DOCTOR"

I have received several favorable comments about my recent article contrasting a physician and a provider. Thank you! In considering what I wrote, I realized that I did not go into the qualities of the physician. In this article I would like to elaborate on some of those qualities. In so doing I am sure I will leave many out that some of you feel are very important. I welcome your additions and suggestions. While these qualities are not uniquely mine, I have adopted them as the standard for what I feel is a "real doctor".

First the "real doctor" is foremost a *healer - the medical expert*, if you will. From the first day in medical school, we are taught that our job is to solve the riddle of illness, comfort the patient, and do what we can with medicine and surgery to promote healing and to return the patient to a better quality of life. I personally feel that this is the driving force behind most of us entering medical school.

Second, the "real doctor" is a *teacher*. I have found words a fascinating study in this portion of my life. When we know their derivation and meaning they take on a different quality. The Greek derivation of the word "doctor" is teach, and that is what we are, teachers. We have to have the patience to explain, to nurture, and explain again just like our teachers. We must make sure that the younger generation has the opportunity to understand illness, bad health habits, the problems associated with teenage pregnancy, and yes, even pollution of our environment. We must teach and share and communicate.

Third, the "real doctor" is an *advocate*, the one who speaks for the patient, the intercessor, the one who calls and looks after the social services needs.

This leads to the fourth thing, the "real doctor" is the *manager*, and the *coordinator* of the health care team. As we have become increasingly specialized, we have more persons on the team. We need the manager to coordinate the care, the testing, the treatment, and finally the plan of care outside the institution.

The "real doctor" must be a *scientist*. We must never forget that those in our care are dependent on our knowledge and skills. We must have as a lifelong avocation the attainment of knowledge and the development of our skills. We must be dedi-

(Continued on page 347)



## RESOURCE ALLOCATION

For those who haven't heard, there's a new buzzword for health care rationing. It's called (you guessed it) RESOURCE ALLOCATION. Sounds good, doesn't it. Much better than RATIONING. The bureaucratic ring is evident. Could the politicians do it to us again? Remember the Medicare fee freeze in 1983 and the subsequent cost-shift to the private sector? I wonder who is blamed for the excessive cost increases in the private sector? Will physicians and hospitals be the scapegoats for the inevitable rationing of resources? If our politicians have their way, you can bet on it! How can this be prevented? Can physicians ethically serve their patients and at the same time be a party to rationing? Can physicians take advantage of the positive aspects of resource allocation (and there are probably positive aspects) and at the same time lay the negative aspects at the feet of the politicians? With imagination and ingenuity, I believe we can.

Health care rationing already occurs on a daily basis. These rationing decisions are made on a shared basis among patients, families and physicians, without coercion, and also, to some extent, with coercion from third parties. Unfortunately, the involvement of third parties is, more often than not, arbitrary and irrational. Assuming that rationing is inevitable (and even desirable) can it be implemented in an ethical, rational, non-arbitrary, humane and fair fashion? Instead of waiting for politicians to solve this problem, leaving physicians and patients to suffer the consequences (and blame), perhaps organized medicine should take the lead in proposing and developing a system of appropriate resource allocation based on cost/benefit ratios in a prospective fashion. The involvement of lay persons, including attorneys, clergy, government representatives, etc. in the process of development and implementation would help to insure that as many views as possible were represented. Implementation could be based on prospective guidelines with the right to appeal difficult or unusual cases

to a determination board. Some latitude would be granted in cases of absolute emergency.

Obviously, this is an emotional subject. Just as obviously, the remedy mentioned above is not necessarily correct and certainly not easy to achieve. However, faced with the realities of the situation (perception of escalating costs, and political necessities), this and other alternatives should be examined closely and aggressively pursued in as positive a fashion as possible.

George E. Abraham, II, MD  
Associate Editor

## Presidents's Page

*(Continued from page 346)*

cated to the advancement of that knowledge, so that all may benefit. Money, goods, and property may all be taken from you by another, but your knowledge can never be taken.

The "real doctor" must be the *counselor*. No one is better suited or better trained to be the intervener in times of family strife. We have the background knowledge of the family, the trust of the family and the training to be the one offering advice.

Finally and probably the most important of all, the "real doctor" must be a *friend*. We share the good and the bad, we offer help and advice, and we do not offer judgement. What greater compliment could be had than to be called "friend".

Healer, teacher, advocate, manager, scientist, counselor, friend -- a "real doctor".




## Book Review

***Genetics and You*, by Dr. John F. Jackson, Fenwick Press, 2024 Southwood Rd., Jackson, MS 39211, \$3.95, ISBN 0-9628981-0-4.**

In his usual fashion, Dr. Jackson has produced an excellent, easily understood and complete guide for the patient concerned about genetic diseases. This book covers the entire spectrum of genetic problems very well. It would save the busy general practitioner or OB/GYN physician much time in explaining all the topics which Dr. Jackson's book covers so nicely. It also offers an excellent glossary which the patient can refer to in order to interpret certain medical terms that they may encounter later. This book is very affordable and I would recommend that anyone who deals with patients with genetic problems have it available to dispense to patients in their office. I would suggest that anyone dispensing this book read it prior to dispensing it to patients.

Charles S. Knight, MD  
Jackson, Mississippi

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# Physicians' Recognition Award

Thirty-one MSMA members were named recipients of the AMA Physicians' Recognition Award in July 1991. This award is presented by the American Medical Association to Physicians who have voluntarily completed the specified number of continuing education hours. These physicians are presented below by medical society.

Physicians can receive the PRA certificate valid for one, two, or three years. For a one-year award, physicians report 50 hours of continuing medical education, including a minimum of 20 hours of Category 1; for the two-year award, physicians report 100 hours CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1.

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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **Fundamental Elements of the Patient-Physician Relationship**

From ancient times, physicians have recognized that the health and well-being of patients depends upon a collaborative effort between physician and patient. Patients share with physicians the responsibility for their own health care. The patient-physician relationship is of greatest benefit to patients when they bring medical problems to the attention of their physicians in a timely fashion, provide information about their medical condition to the best of their ability, and work with their physicians in a mutually respectful alliance. Physicians can best contribute to this alliance by serving as their patients' advocate and by fostering these rights:

1. The patient has the right to receive information from physicians and to discuss the benefits, risks, and costs of appropriate treatment alternatives. Patients should receive guidance from their physicians as to the optimal course of action. Patients are also entitled to obtain copies or summaries of their medical records, to have their questions answered, to be advised of potential conflicts of interest that their physicians might have, and to receive independent professional opinions.
  2. The patient has the right to make decisions regarding the health care that is recommended by his or her physician. Accordingly, patients may accept or refuse any recommended medical treatment.
  3. The patient has the right to courtesy, respect, dignity, responsiveness, and timely attention to his or her needs.
  4. The patient has the right to confidentiality. The physician should not reveal confidential communications or information without the consent of the patient, unless provided for by law or by the need to protect the welfare of the individual or the public interest.
  5. The patient has the right to continuity of health care. The physician has an obligation to cooperate in the coordination of medically indicated care with other health care providers treating the patient. The physician may not discontinue treatment of a patient as long as further treatment is medically indicated, without giving the patient sufficient opportunity to make alternative arrangements for care.
  6. The patient has a basic right to have available adequate health care. Physicians, along with the rest of society, should continue to work toward this goal. Fulfillment of this right is dependent on society providing resources so that no patient is deprived of necessary care because of an inability to pay for the care. Physicians should continue their traditional assumption of a part of the responsibility for the medical care of those who cannot afford essential health care.
-



# Medical Organization

## Dr. Hartness Installed as President of the Mississippi Academy of Family Physicians

D. Stanley Hartness, MD of Kosciusko was installed as the 43rd President of the Mississippi Academy of Family Physicians (MAFP) at their recent scientific assembly held in Biloxi.

Dr. Hartness has been in private family practice in Kosciusko for 22 years and is a former Chief of Staff at Montfort Jones Memorial Hospital where he is still on staff. Dr. Hartness received his BS degree from Mississippi State University and his MD degree from the University of Mississippi School of Medicine.

Dr. Hartness' MAFP offices include: director, secretary-treasurer, vice president, and president-elect. He is also presently a member of the Board of Trustees of the Mississippi State Medical Association.

Other officers installed included: John F. Hassell, MD of Laurel, president-elect; Frank W. Bowen, MD of Carthage vice-president and Joe D. Herrington, MD of Natchez, secretary/treasurer.

Eugene Wood, MD of Jackson was elected delegate to the Academy of Family Physicians with Dr. Hartness as alternate delegate.

Five physicians were installed as directors, including: Dr. Robert R. Herrington of Columbia; Dr. David G. Hall of Natchez; Dr. Michael Ard of Louisville; Dr. Carl G. Nichols of Leland; and Dr. William A. Spencer of Oxford.

The MAFP Memorial Award was presented to Dr. Andy Thaggard and Dr. Teresa McKetney received the Bevell Award.

The 600 plus member Mississippi Academy of Family Practice is an affiliate of the American Academy of Family Physicians (AAFP).



*Academy officers, from left to right, are Robert R. Herrington, MD, director; David G. Hall, MD, director; Joe D. Herrington, MD, secretary-treasurer; Frank W. Bowen, MD, vice-president; John F. Hassell, president-elect; D. Stanley Hartness, MD, president and alternate delegate to AAFP and Eugene G. Wood, MD, Delegate to AAFP*



## Dr. Rose Receives MAFP Physician of the Year Award

Dr. Walter H. Rose, an Indianola physician, received the Mississippi Academy of Family Physicians' highest award at the academy's recent Scientific Assembly.

The Family Physician of the Year Award is given in recognition and appreciation for outstanding leadership and services to Family Medicine in Mississippi. This Award was established in honor of Dr. John B. Howell, a longtime member, and delegate to the American Academy of Family Physicians.

Dr. Rose entered private practice in Indianola in 1965 and is a past Chief of Staff at South Sunflower County Hospital of which he is still on staff.

Dr. Rose was elected Diplomate of the American Board of Family Practice and Charter Fellow of American Academy of Family Physicians. He has also served as assistant professor for the Department of Family Medicine at the University of Mississippi Medical Center and past president of the Mississippi Academy of Family Physicians. He is presently serving as alternate delegate and Bylaws Committee member to the American Academy of Family Physicians.

Dr. Rose takes a very active interest in community affairs having served on district and numerous state committees of the Sunflower County Heart Association, as well as president, vice president, secretary, Board of Directors and committee chairman of the Mississippi Heart Association. Even though Dr. Rose is very dedicated to his work, family and church, he has found time since 1982 to take a Medical/Dental Team to Honduras each year.

He is an active member of the Administrative Board of the Methodist Church serving as president of the Methodist Men's Club, Sunday School teacher and is a Gideon. A native of Georgia, Dr. Rose is married to the former Julia Clower. They are the parents of three children. He attended schools in Georgia, receiving his BA from the University of Mississippi, and MD degree from the University of Mississippi School of Medicine.



*Dr. Walter H. Rose of Indianola received the Mississippi Academy of Family Physicians' Physician of the Year Award.*

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## Personals

**George E. Abraham** of Vicksburg has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

**William R. Arnett** of Hattiesburg has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

**Stephen J. Beam** of Hattiesburg has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

**Kyle Batemen** has associated with Charles Tyler in the practice of Family Medicine at Collins Clinic, Sixth and Holly Streets, Collins, MS.

**Judith Bradley** has associated with Eric Lindstrom of Laurel in the practice of Ophthalmology, Lindstrom Eye Clinic, PA, 318 South 10th Ave.

**Gary D. Carr** of Hattiesburg has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

**Richard H. Clark** of Hattiesburg was awarded the Distinguished Eagle Scout Award. This award is granted to Eagle Scouts who, after 25 years, have distinguished themselves in their life, work, and have shared their talents with their communities on a voluntary basis.

**C. Ralph Daniel, III** of Jackson has been promoted to clinical professor of medicine (dermatology) at

the University of Mississippi Medical Center.

**Suman K. Das**, professor and chief, Division of Plastic Surgery, University of Mississippi Medical Center, is chairman-elect of the Plastic Surgery Section of the Southern Medical Association.

**J. T. Davis, Jr.** of Oxford announces the relocation of his office to 2168 South Lamar Blvd., Oxford and 6027 Walnut Grove Road, Memphis TN.

**Mark C. Droffner** of Liberty has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

**Rebecca R. Duff** has associated with The Dermatology Clinic of Hattiesburg, P.A. for the practice of dermatology - diseases of the skin and skin surgery, 104 Asbury Circle, Hattiesburg.

**Daniel P. Edney** has associated with The Street Clinic, Vicksburg in the practice of internal medicine.

**Richard C. Fleming, Jr.** announces the relocation of his medical practice to 1216 25th Avenue Meridian, MS.

**Gardner L. Fletcher** has associated with The Diagnostic Chest Clinic, Hattiesburg in the practice of Pulmonary Medicine, specializing in chest, lung and sleep disorders.

**Walter C. Gough** of Drew has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

**William Grantham** announces the opening of the Family Medicine Clinic, P.A., Suite 1100, Medical Arts Building, McComb in association with Doug Perry and Chris Schwartz.

**Stuart T. Guttman** announces the relocation of his office to 17 Marks Road, Ocean Springs, MS.

**Stephen L. Harless** of Hattiesburg has associated with South Mississippi Emergency Physicians, P.A. in the practice of emergency medicine.

**Jack G. Hudson** of Hattiesburg has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians. He also announces the relocation of his practice of family medicine to the Professional Health Center, 115-A Highway 49 South, Hattiesburg.

**E. Jeff Kennedy** has associated with Central Orthopaedic Clinic, P.A., Jackson, for the practice of general orthopaedic surgery, foot and ankle orthopaedic surgery, 971 Lakeland Drive, Suite 1250.

**William E. Loper, III** has been appointed part-time clinical instructor at the University of Mississippi School of Medicine, Department of Family Medicine.

**Chester Lott Jr.**, of Starkville has association with Starkville Clinic for Women for the practice of obstetrics and gynecology.

**S. Scott Massingill** has joined Rush Medical Group, P.A. of Meridian in the practice of pediatrics and adolescent medicine.



Scott H. McPherson has associated with Lakeland Radiologists, P.A., for the practice of radiology, 971 Lakeland Drive, Suite 400, Jackson, MS.

William Edwin Moak of Richton has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

John C. Mutziger of Meridian has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Doug Perry announces the opening of the Family Medicine Clinic, P.A., Suite 1100, Medical Arts Building, McComb, in association with William Grantham and Chris Schwartz.

Elizabeth N. Roy has associated with The Street Clinic, Vicksburg for the practice of pediatrics.

Chris Schwartz announces the opening of the Family Medicine Clinic, P.A., Suite 1100, Medical Arts Building, McComb in association with William Grantham and Doug Perry.

Kelly Scott Seagers, Jr. of Iuka has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Curtis Slipman announces the relocation of his Vicksburg office to Southern Orthopedic Building, 1 Medical Plaza Drive, Vicksburg, MS.

Barry S. Sullivan of Cleveland announces the relocation of his prac-

tice and his affiliation with Internal Medicine Associates of Oxford.

Walter Travis Taylor, Jr. announces the opening of his medical practice specializing in anesthesiology at Grenada Lake Medical Center, Grenada.

Phil Thompson of Raleigh has completed the continuing medical hours necessary to maintain membership in the American Osteopathic Association (AOA).

Billy L. Walker announces the opening of his office at Suite 207, Lakeland Drive, Jackson, MS for the practice of dermatopathology. Dr. Walker was Fellow in dermatopathology at the University of Alabama, Birmingham, July 1, 1990 - June 30, 1991.

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## Personals/continued

**W. Lamar Weems**, who is now practicing with the Mississippi Urology Clinic, P.A., Jackson, has been elected to a two year term as a member of the Executive Committee of the American Urological Association.

**Brent R. Wheeler** has associated with the Surgery Clinic of Hattiesburg, P.A. for the practice of general, thoracic, and vascular surgery and surgical GI endoscopy.

**Nancy Weible** has recently joined the staff of Immediate Care, a satellite facility of Hattiesburg Clinic.

**John Weldon** an emergency medicine physician, was appointed to the position of Medical Director of the 24-hour Ocean Springs Hospital Emergency Services.

**Charles H. Williams** has joined the staff of Charleston Clinic, Charleston, MS in the practice of family medicine.

**J. Wells Wilson** has associated with the Brookhaven Surgical Clinic for the practice of general and vascular surgery, 1024 Biglane, Dr.

Items for the  
Personals Column  
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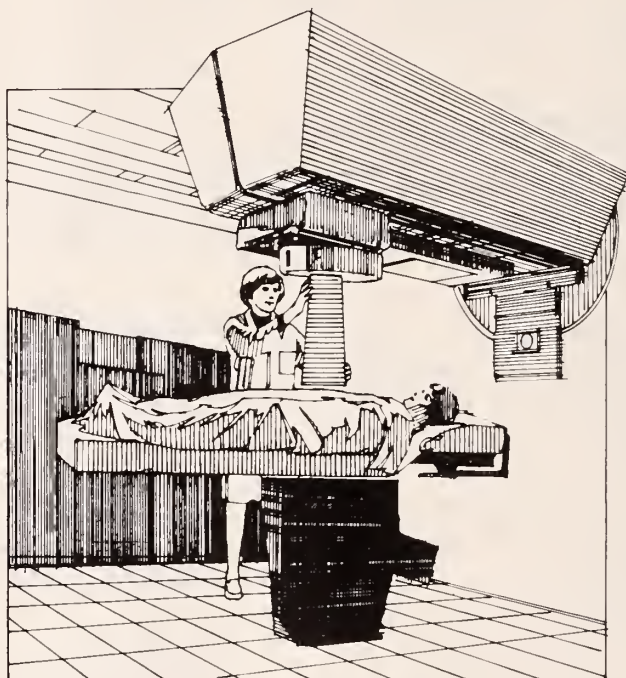
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The Mississippi DDS is recruiting physicians for part-time employment in the Jackson Office. Job requires review of medical reports for determination of benefit eligibility under Social Security criteria. Board certified/eligible psychiatrists, pediatricians, pulmonologists, cardiologist and neurologists are needed. Flexible work schedules. For information contact Deborah Warriner at 601-923-2153.



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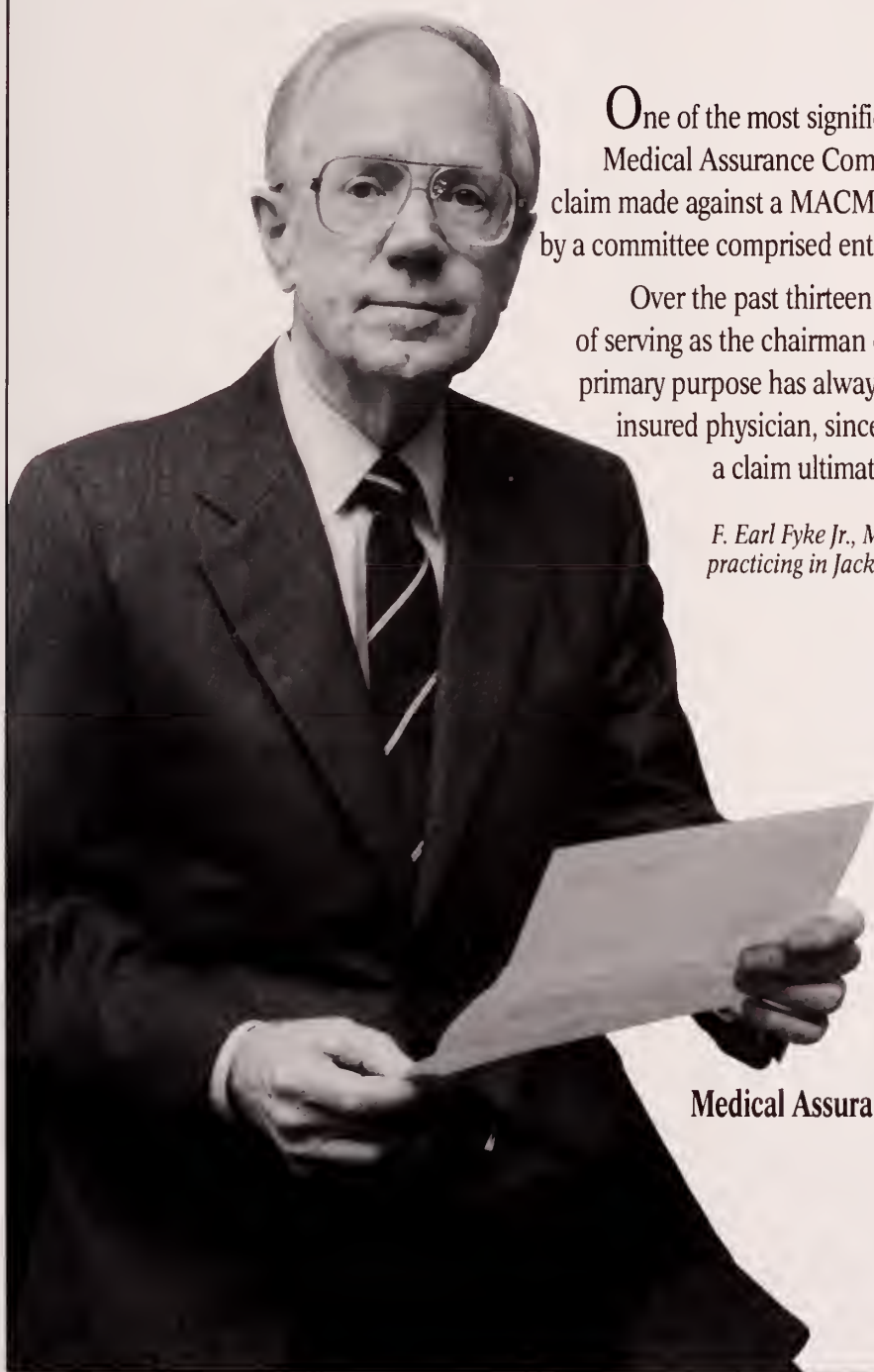
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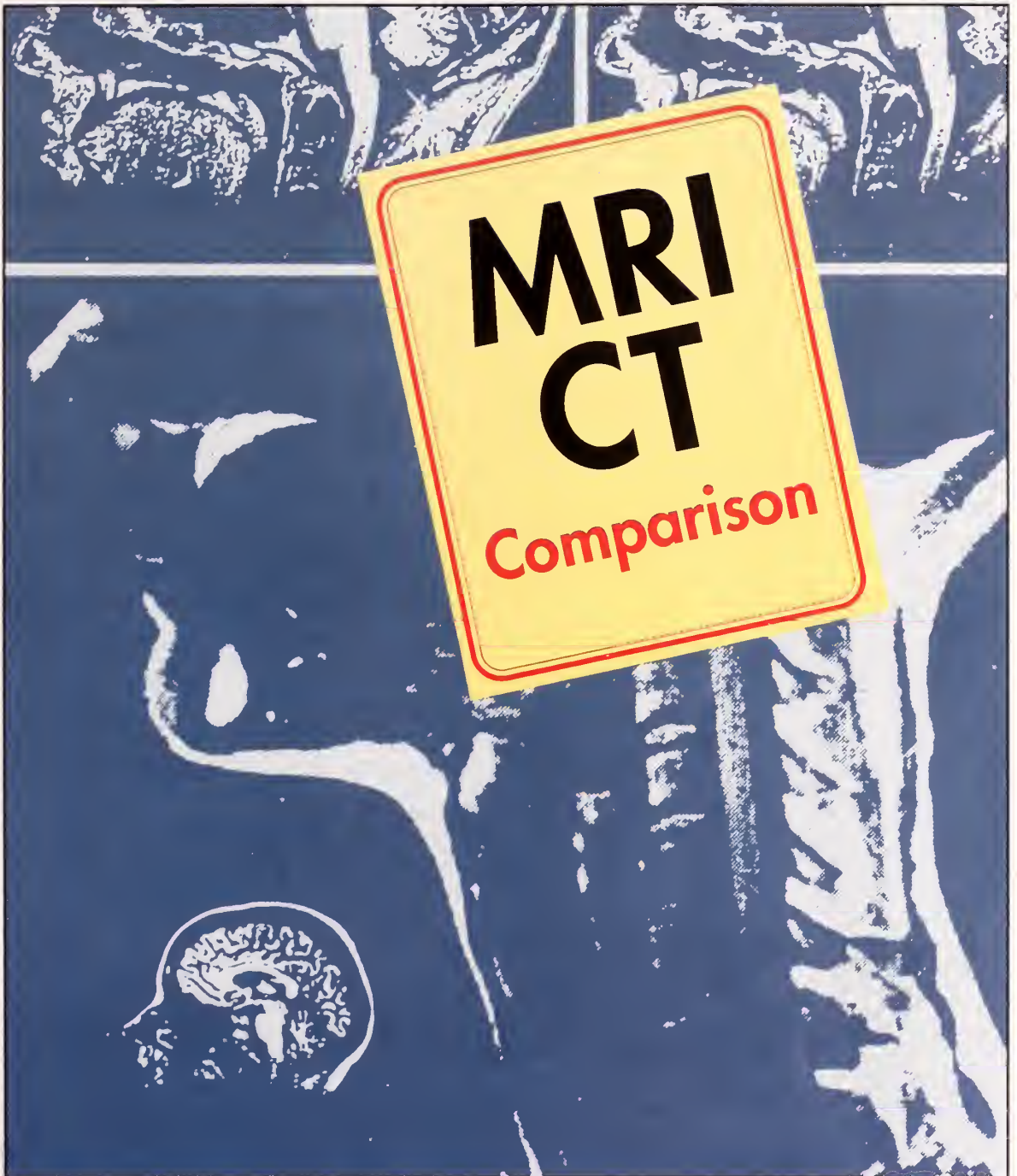


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VOLUME XXXII

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 10

October 1991

Dear Doctor:

The **Mississippi Foundation for Medical Care** has scheduled three workshops in October. The "PRO Update" sessions, primarily for utilization review and medical record staff, will include programs in Jackson, Gulfport and Oxford. Joyce Shearry, manager of the MFMC Medical Record Department, and Marie Hall, manager of Medicaid/Private Review, will serve as faculty. Medical Director Dr. James S. McIlwain will also participate. The Jackson Pro Update will be Oct. 15 at the Holiday Inn Medical Center. Gulfport Holiday Inn will be the site for the Oct. 17 PRO Update. The final program on Oct. 29 will be at the Oxford Best Western. Registration begins at 8:30 a.m. with each program continuing through mid-afternoon. There is no charge to attend. To register for the workshops or for more information, contact Shelia Parkman, MFMC communications coordinator at 354-0304.

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Four **RBRVS and Medicare Payment Reform** workshops have been scheduled during November. These workshops cosponsored by The Mississippi State Medical Association and The AMA will be held in Columbus, November 12; Jackson, November, 13 and Hattiesburg, November 14. For further information contact Debra Collins, MSMA, (601) 354-5433 or 1-800-898-0251. This course is for physicians, medical office managers, and staff who are concerned about the impact Medicare changes will have on office management and practice income.

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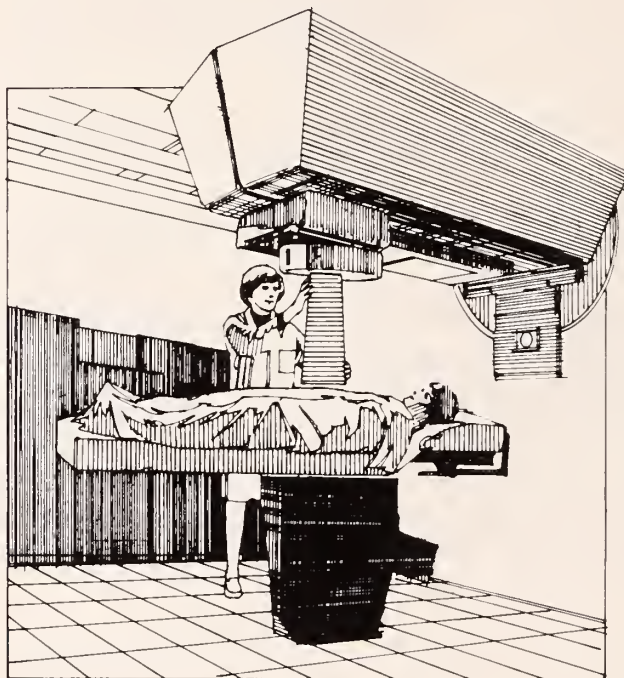
The **Southeast CME Symposium - "Accrediting the Accreditors"** will be held November, 8, at the Mississippi Beach Resort Hotel in Biloxi. This symposium is jointly presented by Arkansas Medical Society, Louisiana State Medical Society, Medical Association of the State of Alabama and the Mississippi State Medical Association and sponsored by Memorial Hospital at Gulfport. This conference is intended for physicians in all areas of specialization, as well as nonphysician professionals, who are actively engaged in the design and/or implementation of continuing medical education for physicians. For more information call Lora Lane, MSMA, (601) 354-5433 or 1-800-898-0215.

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# Intraosseous Administration of Lorazepam: Same-Dose Comparison With Intravenous Administration in the Weanling Pig

EMILY S. PENDER, MD

CHARLES V. POLLACK, Jr., MA, MD

BONNIE N. WOODALL, MD

BRUCE R. PARKS, PhD

The intraosseous (IO) route of venous access was first developed in the 1920s<sup>1</sup> and became widely popular in the 1940s.<sup>2-4</sup> The method fell out of favor in the 1960s and 1970s with the advent of stable and safe indwelling plastic intravenous (IV) catheters. In the 1980s, however, the development of algorithmic pediatric advanced life support required rapid, reliable venous access for fluids and medications that conventional IV methods could not consistently provide. The IO technique was reexamined in this light, and is now widely accepted as the vascular access of choice in pediatric emergencies involving hypodynamic cardiovascular states.

While a burgeoning literature has documented the widespread utility of IO infusions in the ED, ICU, and even prehospital settings,<sup>5-13</sup> it has been primarily through clinical reports, not controlled studies, that IO dosing of specific medications outside of those used in advanced cardiac life support has been described.<sup>14,15</sup> An area of particular interest has been IO administration of anti-seizure medications.<sup>14,16</sup> Status epilepticus is an excellent example of a relatively common clinical scenario in which parenteral medi-

cation is the necessary therapy, but in which conventional IV access may be difficult or even impossible to attain.

The attainment of serum levels of diazepam and phenobarbital after IO dosing, similar to those after IV dosing, has been demonstrated.<sup>16</sup> The benzodiazepine, lorazepam (Ativan<sup>®</sup>, Wyeth-Ayerst Laboratories, Philadelphia) is now also widely used as a first-line agent in the ED treatment of status epilepticus in infants and children.<sup>17,18</sup> There are no reports in the literature, however, of the intraosseous administration of lorazepam.

While studies directly comparing IV and IO dosing of various drugs have been favorable towards the use of the IO route,<sup>12,19-22</sup> individual drug pharmacokinetics cannot be assumed to be equivalent. We therefore undertook a study in the weanling pig model to compare serum levels of lorazepam attained by the IO and IV routes.

## MATERIAL AND METHODS

This protocol was approved by the Institutional



Animal Care and Use Committee of the University of Mississippi Medical Center.

Four Yorkshire cross female swine weanlings, weighing between 10 and 15 kg, each received an intramuscular injection of ketamine, 22 mg/kg, and acetylpromazine, 1.2 mg/kg. Anesthesia was subsequently supplemented, as required, with isoflurane by mask. The animals did not require intubation or ventilation. A peripheral IV line was initiated in a dorsal forelimb or ear vein and placed to heparin lock.

The skin overlying the proximal tibia was then prepped with povidone-iodine, and a 15-gauge Jamshidi(R) bone marrow needle was introduced perpendicularly into the flat anteromedial aspect of the bone, one to two centimeters below the tibial tubercle. Intramedullary placement was confirmed by aspiration of blood and marrow contents, and 10 cc of normal saline was injected to clear the catheter. Initial placement was successful in all cases. Each animal then received a single, weight-adjusted dose of lorazepam, 0.1mg/kg, via the IO catheter, by slow push. Each dose was followed by a 10 cc bolus injection of normal saline, after which the IO needle was removed and digital pressure was held over the site through sterile gauze for at least five minutes.

Blood samples were drawn through the peripheral IV line at 5, 10, 15, 30, and 45 minutes after dosing, and assay for the serum level of lorazepam was performed on each specimen. Levels were measured by gas chromatography in a reference laboratory (MedTox Laboratories, St. Paul, Minnesota).

The IV catheters were removed after the last sample was drawn. The animals all recovered without incident, and each was fully ambulatory within two hours after completion of the procedure.

A week-long washout period ensued, during which the animals were fed a routine diet and allowed normal activity. Attending veterinarians evaluated their recovery, subsequent activity levels, and weight gain during the week as satisfactory and within normal limits for age and breed.

Each animal was then reweighed and anesthetized by the same procedure. Two peripheral IV lines were initiated on each animal (in ear or forelimb veins), and baseline blood samples were drawn to confirm washout of the previous (IO) dose of lorazepam.

One IV line was placed to heparin lock. Through the other line lorazepam was administered IV to each animal, at the same 0.1 mg/kg dose (recalculated for weight gain), by slow push. After a 10 cc normal saline flush, the dosing line was removed, and through the heparinized catheter blood samples for lorazepam

assay were again drawn at 5, 10, 15, 30, and 45 minutes after dosing. Each animal therefore served as its own control. At the completion of the sampling interval, the catheters were removed and the animals were allowed to recover.

Average levels attained by the two routes were compared using analysis of variance. Significance was determined by a  $p < 0.05$ .

## RESULTS

Figure 1 shows the average serum levels ( $\pm$  standard deviation) of lorazepam achieved by equivalent IO and IV administration. "Zero" samples drawn on the second drug administration day confirmed washout of the preceding dose.

There was no statistical difference between levels achieved by the IO and IV routes at any interval. The levels achieved via the IO route paralleled the IV levels throughout the sampling period.

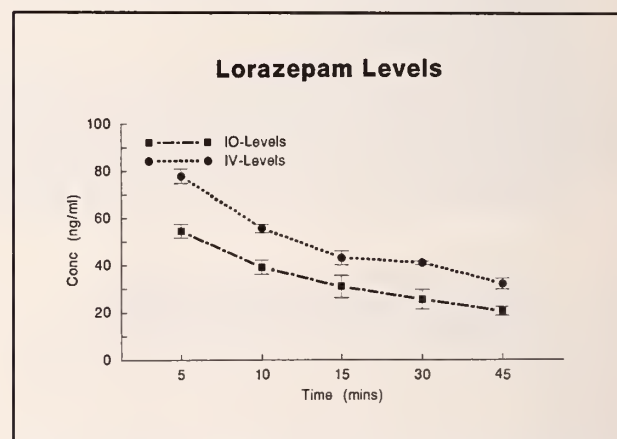


Figure 1: Graph of mean ( $\pm$  SD) lorazepam levels (ng/ml) after IO and IV administration at time zero. Levels are statistically indistinguishable.

## DISCUSSION

Seizures are among the more common emergencies seen in pediatric EDs. Status epilepticus is a less common, but truly life-threatening manifestation of neurologic dysfunction. General supportive measures, such as airway protection and supplemental oxygen, must be followed by the rapid parenteral delivery of an anticonvulsant regardless of the etiology of the seizures. Diazepam, lorazepam, phenytoin, and phenobarbital all have a role in the management of status epilepticus, but the benzodiazepines are generally considered first-line therapy.<sup>17</sup>

Peripheral venous access is often difficult to achieve in the seizing pediatric patient, and attempts at cen-



tral line placement are potentially fraught with complications. Diazepam in standard IV doses has been shown to be effective when given IO.<sup>16</sup> Our data from this model indicate that lorazepam may also be administered IO with the attainment of similar serum drug levels, although, like diazepam, IO levels remain somewhat lower than IV levels.<sup>16</sup> While confirmatory studies are needed, we recommend the accustomed initial IV dosage of lorazepam when the clinical situation demands intraosseous dosing. As always when benzodiazepines are used, constant attention to the respiratory status of the patient must be maintained.

## CONCLUSION

We present data from the pig model that demonstrate the achievement of serum levels of lorazepam, when administered by the IO route, that parallel those achieved after IV administration. While as with diazepam the IO levels of lorazepam remain somewhat lower than IV levels, we recommend no modification of the standard IV dose of 0.1mg/kg; clinical response should determine subsequent doses. In the scenario of the pediatric patient who requires immediate parenteral medication, these data suggest that treatment with lorazepam need not be delayed until traditional IV access is attained.

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This study was supported in part by Grant #2 SO7 RR05386 awards from the Biomedical Research Support Grant Program, Division of Research Resources, National Institutes of Health.

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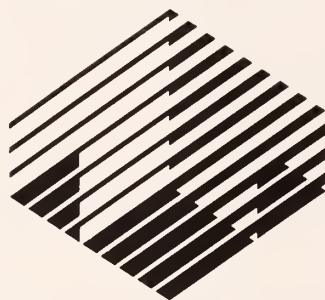
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Dr. Pender and Dr. Woodall are from the Division of Pediatric Emergency Medicine, Dr. Pollack is from the Division of Emergency Medicine, and Dr. Parks is from the Departments of Pediatrics and Pharmacology, University of Mississippi Medical Center.



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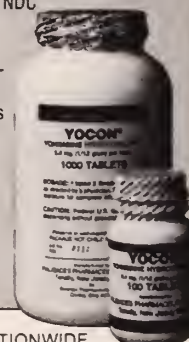
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# Case Report:

## MRI and CT Comparison of an Orbital Cavernous Lymphangioma

RIFE E. HUCKABEE, MD  
FRANK A. RAILA, MD

Computed tomography (CT) scanning has significantly enhanced the diagnosis of orbital lesions, specifically lymphangioma.<sup>1-3</sup> Previous magnetic resonance imaging (MRI) in the investigation of orbital tumors did not improve the differential diagnostic ability over CT. However, older MRI studies had the disadvantage of low field strength, thick slices, wide spacing and the lack of surface coil technique.<sup>4-6</sup> These problems have been overcome resulting in increased spatial perspicuity and improved soft tissue contrast resolution that can be superior to CT. Other advantages of MRI are its lack of radiation to a radiosensitive lens, absence of beam hardening artifacts, a safer intravenous contrast agent and multiplanar capabilities. Disadvantages are presence of ferromagnetic substances, claustrophobia, and movement artifacts.<sup>4,7</sup> Our report compares the result of MRI imaging with CT in a case of a cavernous lymphangioma involving the left orbit.

### CASE REPORT

A four-year-old black male initially presented to the ophthalmology clinic with mild proptosis following an episode of blunt trauma to the left eye. Ultrasonic examination suggested retrobulbar hemorrhage. The patient was followed conservatively for one month, but no improvement was noted. A CT scan was initially obtained. A Siemens Somatom-DR CT unit was used (Iselin, NJ). The technical factors were Kv 125, slice thickness 2mm contiguous. Nonionic contrast was injected intravenously (Optiray 320, Mallinckrodt, St. Louis, MO). The CT scans were performed in the axial and coronal projections.

The CT scan demonstrated a 2.5 x 1.5 diameter mass of soft tissue attenuation within the medial intraconal compartment of the left orbit. The margins were hazy and there was no internal architecture noted

within. A fluid-fluid level within the posterior portion of the lesion was compatible with sequela of hemorrhage (see Figures 1A & 2C).



Figure 1: A (top): CT coronal, 125 Kv, 2mm thick, Optiray contrast (Mallinckrodt).

B (center): MR coronal, TR2000, TE30, 256 x 128, 2NEX, 3mm thick.

C (bottom): MR sagittal, TR650, TE20, 256 X 256, 1NEX, 5mm thick.





Figure 2

A: MR axial, TR2500, TE30, 256 x 256, 1NEX, 5mm thick.  
C: CT axial, 125 Kv, 2mm thick Optiray contrast.

B: MR axial, TR2500, TE110, 256 x 256, 1NEX, 5mm thick.  
D: MR axial, TR2000, TE20, TI160, 256 x 256, 2NEX, 4mm thick.

Preoperative evaluation with MRI followed one week later. The MRI scans were performed utilizing a GE 1.5 Tesla Signa unit and head coil (Milwaukee, WI). The MRI studies revealed a well-margined, multi-chambered tumor. There were high signals in these chambers on T1 weighted, proton density, T2 weighted and inversion recovery sequences. These represented varying degrees of acute and subacute hemorrhage. The presence of fluid-fluid level in one chamber indicated older hemoglobin degradation products (see Figures 1B, 1C, 2A, 2B & 2D). Surgical excision revealed a lobulated mass which when incised was shown to contain old blood. Microscopic evaluation revealed the tumor to be composed of collapsed multiple chambers having diaphanous endothelial walls. Some of these chambers contained old blood. There were some scattered minimal aggregates of lymphocytes but no evidence of any lymph follicles. Hemosiderin particles were noted. There were occasional groups of small nutrient vessels. The pathologic diagnosis was cavernous lymphangioma with intratumoral hemorrhage (see Figure 3).

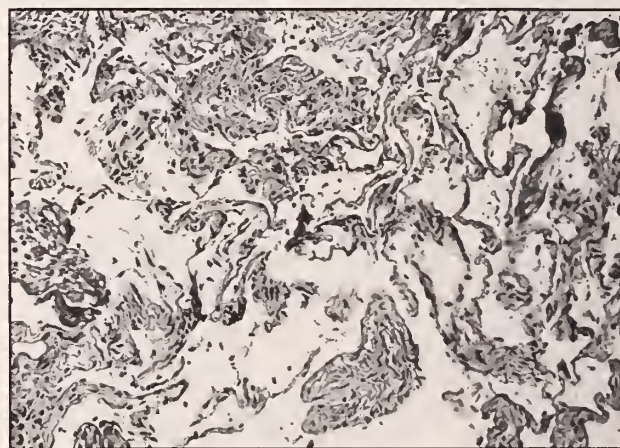


Figure 3 Cavernous lymphangioma: H-E stain, 200X.

## DISCUSSION

Lymphangiomas have a range of prevalence of from 3 to 13% of all ocular tumors noted in two major centers.<sup>2</sup> The age of presentation ranges from birth to the sixth decade but they are more commonly found in children and young adults. There is a greater



female to male and white to black ratio.<sup>2,3,6</sup> The intracanal location is predominant, but the majority of cases are combined.<sup>2,3</sup> There are no lymphatics located in the human orbit. Lymphoid material is only found in the lacrimal gland and conjunctival fornices. Whether lymphangiomas are congenital vascular malformations, hamartomas or true neoplasms has not been proven. Embryonal rests may be responsible.<sup>2,3,8,9</sup> Lymphangiomas are composed of endothelial lined thin-walled vascular channels. There is a variable degree of lymphocytic infiltrate, and lymph follicles may be present. These follicles can enlarge when infected and this would explain the onset of proptosis in some patients when a respiratory infection is present. Lymphoid elements are not observed in pure hemangiomas and arterial-venous malformations. Calcium is more common in hemangiomas but has been seen in lymphangiomas.<sup>3</sup>

Lymphangiomas have a greater tendency to bleed than hemangiomas. On MRI scans lymphangiomas are seen as hyperintense lobulated T1 and T2 weighted images (see Figures 1C and 2B). These MRI characteristics help to differentiate them from cavernous hemangiomas which demonstrate low signal on T1 weighted sequences.<sup>3,6,8</sup>

In our case CT was able to show the fluid-fluid effect but lacked the perspicuity of the MRI pictures. Calcification was not noted on the CT examination and could have been missed by the MRI study. MRI was able to define the fluid-fluid effect, septae, and lobulated outline more clearly. The presence of variable signal characteristics within these compartments were best appreciated by MRI. The fat suppression technique (inversion recovery) and heavily T2 weighted sequences demonstrate a more sharply defined tumor due to the surrounding loss of signal in adjacent fat. Our pathological section demonstrated thin-walled, endothelial lined vascular channels that were in a collapsed state. Some stromal hemosiderin was noted. Occasional areas of mild lymphocytic infiltration were seen but no lymph follicles were noted (see Figure 3).

Although CT was complimentary in part of this examination, MRI exhibited relaxation time criteria and perspicuity that makes it the study of choice in the investigation of orbital tumors especially differentiating cavernous lymphangiomas from hemangiomas.

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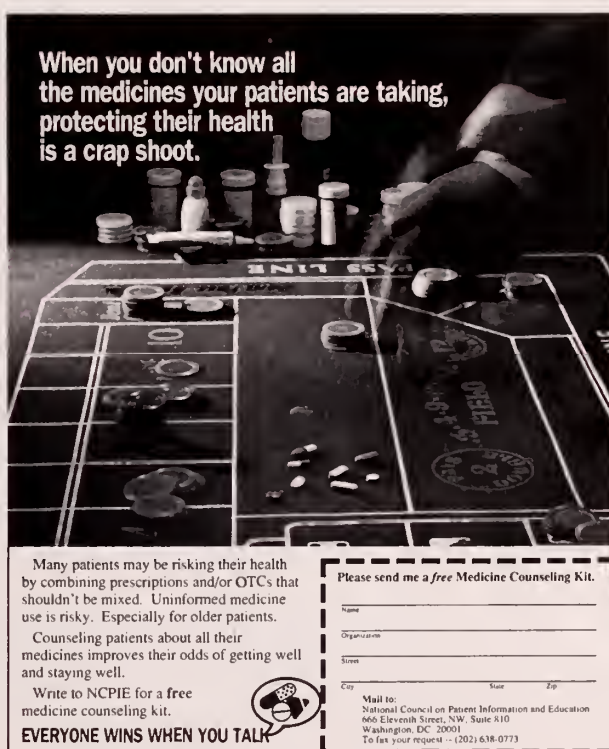
## ACKNOWLEDGEMENT

Janet Henderson for her secretarial assistance.

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*Dr. Huckabee and Dr. Raila are from the Department of Radiology, University of Mississippi Medical Center.*



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## The President's Page

JAMES C. WAITES, MD

### "THE PATIENT"

I would like to take advantage of my office this month and write a note of thanks to each of you who have been concerned about my recent illness. To say I was surprised by what happened is to put it mildly. I suppose that we all feel that we are immortal and invincible until it happens to us. As I am sure that quite a few of you know, I had an acute inferior wall MI on September 10. That I am doing so well is a tribute to the miracles of medicine today and the fast, appropriate work in the emergency room of Dr. David Madden and his fine staff at South Central Regional Medical Center. I have long contended that our ER is "as good as there is" when you have a true emergency. I am pleased that my impression was correct.

I would never suggest that we as physicians should get sick to experience what our patients do, but I will be the first to say that there is an entirely different perspective when you are the patient and not the one in charge of care. Let me share a few of my thoughts with you in this article. When I awoke at about 2:15 AM with chest "discomfort", it was very apparent to me that this was more than "indigestion" or "reflux". I have often been told that cardiac pain is something that is difficult to describe, but something that would be recognized if you had it. I concur. I told Jo, my wife, that I was in trouble, and made the decision to use the car rather than an ambulance to speed up getting to the hospital. It took no more than 15 minutes to be at the ER door. I was immediately carried in by wheel chair and the process was started. To say that treatment was rapid because I was a physician is erroneous, because I was not recognized until I was placed in a room and my wife saw Dr. Dave. Before he entered the room, however, BP was obtained, the monitor was hooked up and the initial care was started. In less than 15 minutes I had my first dose of TPA.

My care (note it was caring and not just treatment) was both professional and swift. It was performed with dignity, even the insertion of the Foley catheter. The responses of my physicians were not only swift, appropriate and professional, but also ones of concern and caring. It is very hard to describe the feeling on entering

*(Continued on page 375)*



## THE SPORT OF CHEERLEADING

Over the past few years we have witnessed a major change in the extra curricular activity of cheerleading in the secondary schools of our state. It has shifted from a rather benign to a more dangerous activity. As cheerleading has expanded and become a significant part of scholastic athletic programs, it appears to have also become a major competitive sport. There is intense competition in being selected as a cheerleader. There also appears to be a competition between opponent schools within this activity.

As this program has expanded and become more aggressive, much greater physical demands are placed on the participants. As a result of this, we are seeing a shift from minor injuries associated with this activity to major traumatic injuries. In past years, problems associated with cheerleading were generally limited to minor sprains and strains and an occasional hoarseness, secondary to vocal abuse. Now, we are seeing major trauma resulting from the more aggressive activities such as use of the mini-trampoline, tumbling, human pyramids, aggressively pitching each other into the air, and similar physical activities. At one time during the 1990 season two patients with skull fractures resulting from falls from the top of human pyramids were hospitalized locally. Reports of similar injuries in other areas were received. In addition, long bone and serious soft tissue injuries have resulted from these activities.

To properly perform these type activities in as safe a manner as possible one needs training in gymnastic techniques. Unfortunately, I cannot find any requirements outlining the training and physical requirements necessary for participation in this school activity. It is now time for school authorities to develop and demand some guidelines for control of this program so that serious injuries can be avoided.

Myron W. Lockey, MD  
Editor

## Presidents's Page

*(Continued from page 374)*

the ER knowing that I was having a MI, but the knowledge of the care I was receiving relieved all my anxiety and calmed me tremendously. The concern and care followed me to the CCU, and by then word had begun to reach my extended family which began to rally to support my wife.

I am fortunate to have a brother who is an invasive cardiologist. With his consultation with Dr. Cecil Williams, my local cardiologist, and my partners George Bush, Ken Grafton, and Bob Thompson, the decision was made to transfer me for coronary catheterization. Thad had no reluctance in doing the procedure, and certainly I had none in regard to him doing it. Again the professionalism, speed, and caring came through at Forest General Hospital. The cardiac catheterization and subsequent angioplasty would have been routine, except that it was on me. It went well, with a well disciplined and organized team. The rest is simply one of getting well and gaining strength back.

The outpouring of support, concern, prayers, cards, letters, flowers, visits, phone calls, food and on and on is difficult to imagine. I, of all men, am truly blest. If you believe, as I do, that friends are more important than money, then I am truly the richest man in Mississippi.

It had been planned that I would do an article on the movie, "The Doctor". I had no idea that I would experience it myself. More on this later. Thanks to all of you for your support and love.

Jimmy



## Letters

**Dear Dr. Johnston:**

Your editorial in the August, 1991 issue of the *Journal of the Mississippi State Medical Association* is the most vicious commentary I have read on people with AIDS written by a health professional. Your comment implying God is purposely killing off homosexuals by having them succumb to the horrors of the AIDS virus and that you are pleased by this shows an appalling insensitivity for the suffering of others as well as an inappropriate Levitical theology.

Even if one considers homosexuality sinful, as you apparently do, sinful people are not excluded from the care and compassion you once gave an oath to provide. You express pride in being a physician. I am feeling shame. I am ashamed of you for writing such an article, ashamed of the Journal for printing it and ashamed of myself for being in an organization who member would express such a view.

**John Y. Gibson, MD**  
Jackson, MS

**To the Members MSMA**

**Dear Doctors:**

Thank You for reading the MSMA Journal and my editorial entitled "Gay". I appreciate your thoughtful responses. The editorial was meant to express my concern over what seems to be a growing segment of our society. The issue was not AIDS.

I am well aware of the horrors, tragedies, and suffering of patients with AIDS both those that have gotten it inadvertently through blood transfusions, and similar means as well as those who have gotten it through homosexual acts. You are correct that I am not one to expound on AIDS, and that was not my intent.

You may feel that there is no problem with homosexuality. You are certainly welcome to your opinion.

I do hope that future editorials will be more to your liking. After ten years of writing them for the Journal, I feel fortunate that this is the first to be so misconstrued.

**Joseph E. Johnston, MD**  
Associate Editor

## Comment

The staff of the *Journal of The Mississippi State Medical Association* has a long established policy that an editorial is a reflection of the writer. It in no way carries any stipulation or implication that such editorial opinions reflect the views, policies, or goals of The Mississippi State Medical Association, its officers, staff, or membership. Such editorials do not carry a stamp of approval by the Association or other editors. This policy holds true for members of the Journal editorial staff as well as guest editorials except in absolutely abusive situations which do not need dignifying by publication. Any attempt to monitor editorial opinions to those reflective of the society or its staff would be very inappropriate.

While such policy does allow publication of opinions contrary to those of many readers we strongly encourage, and actively solicit, letters to the editor and guest editorials, expressing one's reactions to any editorial opinion expressed in the Journal and will publish, with permission of the writer, any such response.

The recent editorial entitled "Gay" by an associate editor was published under the above guidelines. While we have had comments and letters, both pro and con, only one writer has granted permission for publication of his letter. This letter as well as a reply by the associate editor are being published.

As editor of your Journal, I strongly encourage all members and other readers to actively respond to any editorial opinion and allow publication of their response. This action by anyone who feels offended by or has other strong opinions regarding editorials is of interest to the editorial staff, as well as other readers. It is this very action that editorial comments seek to obtain as we do not intend to publish only those things which would be acceptable to all our readers.

**Myron W. Lockey, MD**  
Editor, Journal MSMA



# THINK TALL

Stretch your  
imagination  
when you dream  
about your  
new home.  
Think of being  
welcomed home to  
manicured grounds  
and a winding  
boulevard. After a  
short drive from  
anywhere.

Let your mind soar.  
Walks down fitness  
trails and a cool  
poolside drink.  
Quiet conversation  
with neighbors.  
Heightened  
expectations?  
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#### **Workshop Locations**

##### **Columbus**

Tuesday, November 12  
Ramada Inn  
8:00 am - Noon

##### **Jackson**

Wednesday, November 13  
Holiday Inn Downtown  
8:00 am - Noon & 1:00 pm - 5:00 pm

##### **Hattiesburg**

Thursday, November 14  
Ramada Inn  
8:00 am - Noon

#### **Registration Fee**

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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **OPINIONS ON INTERPROFESSIONAL RELATIONS**

### **Nonscientific Practitioners**

It is wrong to engage in or to aid and abet in treatment which has no scientific basis and is dangerous, is calculated to deceive the patient by giving him false hope, or which may cause the patient to delay in seeking proper care until his condition becomes irreversible.

Physicians should also be mindful of state laws which prohibit a physician from aiding and abetting an unlicensed person in the practice of medicine, aiding or abetting a person with a limited license in providing services beyond the scope of his license, or undertaking the joint medical treatment of patients under the foregoing circumstances.

A physician is otherwise free to accept or decline to serve anyone who seeks his services, regardless of who has recommended that the individual see the physician.

---

### **Nurses**

The primary bond between medical practice and nursing is mutual ethical concern for patients. One of the duties in providing reasonable care is fulfilled by a nurse who carries out the orders of the attending physician. Where orders appear to the nurse to be in error or contrary to customary medical and nursing practice, the physician has an ethical obligation to explain those orders to the nurse involved. Whenever a nurse recognizes or suspects error or discrepancy in a physician's orders, the nurse has an obligation to call this to the attention of the physician. The ethical physician should neither expect nor insist that nurses follow orders contrary to standards of good medical and nursing practice. In emergencies, when prompt action is necessary and the physician is not immediately available, in the per-

formance of reasonable care a nurse may be justified in acting contrary to the physician's standing orders for the safety of the patient. Such occurrences should not be considered to be a breakdown in professional relations.

---

### **Optometry**

An ophthalmologist may employ an optometrist as ancillary personnel to assist him provided the optometrist is identified to patients as an optometrist.

A physician may send his patients to a qualified and ethical optometrist for optometric services. The physician would be ethically remiss, of course, if before doing so he did not ensure that there was an absence of any medical reason for his patient's complaint, and he would be equally remiss if he sent a patient without having made a medical evaluation of the patient's condition.

Physicians may teach in recognized schools of optometry for the purpose of improving the quality of optometric education. The scope of this teaching may embrace subjects within the legitimate scope of optometry which are designed to prepare students to engage in optometry within the limits prescribed by law.

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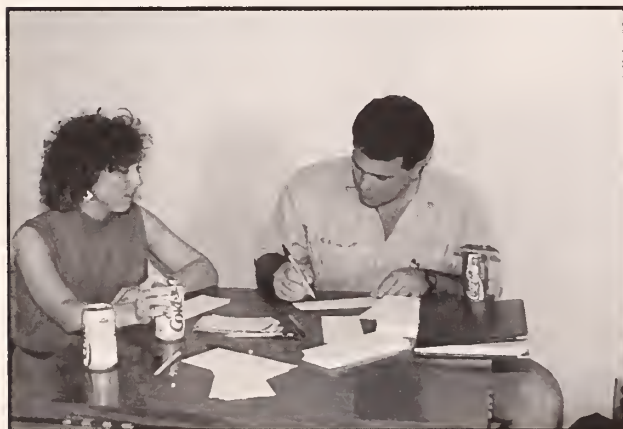
# Medical Organization



On August 26, The Mississippi State Medical Association sponsored a luncheon pizza party for freshman medical students. The party held at the alumni house was a great success.

Pat Scanlon a second year student, coordinated the membership drive for the freshman class. Of the fifty-six students who paid dues, 21 paid their dues for all four years of medical school.

Including representatives from other classes, approximately ninety-five people participated.







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# From the University of Mississippi Medical Center

## Student Enrollment Increases

University of Mississippi Medical Center enrollment for the 1991-1992 academic session increased by 39 students over last year, with a total 1,676 students enrolled.

School of Medicine enrollment totals 398 students, representing 62 counties in Mississippi. The School of Dentistry enrolled 106 students.

In the School of Nursing, enrollment reached 295 students, 200 in the baccalaureate program, 72 in the master's program, and 23 in the registered nurse advanced standing program.

The School of Health Related Professions has 370 students, including 10 in cytotechnology, 31 in dental hygiene, 24 in health record administration, 15 in medical technology, 39 in occupational therapy, 87 in physical therapy, five in respiratory care, 136 in the respiratory care certificate program, and 23 in the emergency medical technology certificate program.

Graduate students in the basic medical sciences total 78.

Certificate programs registered 40 in radiology technology, five in radiation therapy and three in nuclear medicine technology.

The postgraduate number reached 381, including 13 interns, 280 residents, 36 medical fellows, 34 basic medical science fellows, 12 clinical psychology residents and six dental residents.

Dr. Billy M. Bishop, UMC registrar, said Medical Center programs had a 25 percent increase in applicants over the last three years.

## Children's Rehabilitation Center Receives Grant

The Children's Rehabilitation Center at the University of Mississippi Medical Center has received a grant establishing a Pediatric Assistive Device Clinic

to serve patients across the state.

Assistive device technology helps children with significant physical and/or cognitive limitations contribute to their own support and to the environment in which they live. A broad spectrum of devices designed to enhance mobility, communication, daily living activities and cognition are available.

The clinic gives patients from birth to age 21 and service providers the opportunity to use and evaluate assistive technology devices and to explore options which enhance or maintain the independent functioning of children with disabilities. Workshops and demonstrations also are available for adults who would benefit from the clinic's services.

Services for patients, parents and professionals include information and evaluation for appropriate use of devices, training, demonstration, evaluation and information on possible funding sources. Assessments for using assistive device technology are offered in adaptive play, communications, environmental control, seating and mobility, daily living activities, hand-writing alternatives and computer access, application, and software.

Providing habilitative and rehabilitative care for patients, ages birth to 21 years, the Children's Rehabilitation Center's goal is the optimum development of patients within the limits of their abilities, so that they can function with maximum independence in the home, school and community.

The Pediatric Assistive Device Clinic is funded by a grant from START, a special project of the Mississippi Department of Rehabilitation Services, Office of Vocational Rehabilitation which is funded by the National Institute on Disability and Rehabilitation, U.S. Department of Education. For more information, call (601) 984-2900.

## Patient Referrals For Clinical Trials

Physicians who have patients with painful gallstones who may be candidates for biliary lithotripsy may refer them to the Department of Surgery at the University of Mississippi Medical Center.

Dr. Carol Scott-Conner, professor of surgery, is the principal investigator at the Medical Center for multi-center clinical trials funded by the Food and Drug Administration which are designed to test the efficacy of lithotripsy and ursodeoxycholic acid com-



pared to medical treatment alone.

Co-investigators are Dr. James Achord, director of the digestive diseases division, and Dr. Deborah Skelton, assistant professor of medicine in the GI division.

Surgeons use the Storz Modulith SL20 lithotripter, the same "dry" (non-immersion) device used to break up kidney stones. The procedure is done on an outpatient basis and requires only mild sedation.

**Trial eligibility requires:**

1. A single stone of 5-30 mm or up to three stones (with at least one stone with a 5mm or larger diameter) representing a total stone burden of 15 cc or less;
2. Stones that can be located clearly by ultrasound or x-ray;
3. Symptomatic stones (a history of biliary colic) but not presently experiencing acute biliary colic;
4. Radiolucent stones;
5. A functioning gallbladder on oral cholecystography or hepatobiliary nuclear scan;
6. The age range of 21-85;
7. ASA class I, II, or III.

**Patients are not eligible for the study if they:**

1. Have non-radiolucent stones or calcified stones;
2. Are pregnant;
3. Have a history of acute pancreatitis or acute cholecystitis;
4. Have biliary obstruction, a known bile duct stone, or elevated SGPT, SGOT or serum amylase;
5. Have a gastroduodenal ulcer;
6. Have a vascular aneurysm in the shock wave path;
7. Have an abnormal bleeding time or platelet count below 150,000 mm<sup>3</sup>;
8. Are in ASA class IV or V;
9. Have a history of major adverse reaction to bile acid therapy.

For more information, contact Dr. Scott-Conner at (601) 984-5120.

## **Dr. Sandra Holly Receives Award**

Dr. Sandra Holly, third-year psychiatry resident at UMC, has received one of 10 American Psychiatric Association/Mead Johnson Fellowships awarded for 1991-92. The award is one of the highest honors a psychiatry resident can receive during training.

## **Delta Aids ETC Offers Physicians Preceptorship on HIV Management**

A clinical preceptorship in the Charity Hospital HIV Outpatient Clinics is open to physicians from the Delta regions states of Louisiana, Mississippi and Arkansas.

The three-day preceptorship, which is sponsored by the Delta Region AIDS Education and Training Center and the LSU School of Medicine, is presented on a bi-monthly basis. The next two sessions will be September 4-6 and November 6-8.

The preceptorship is entitled *Comprehensive Management of HIV Disease: A Clinical Preceptorship for Physicians*.

For information Contact Gwendolyn Foxworth or Daphne LeSage at 504/568-3855 or the Resource Center, University of Mississippi Medical Center, 601/984-5560.

## **AIDS Helpline**

**for Health Professionals:**

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Health care professionals with a question about HIV/AIDS now have a toll-free number to call: 1-800-548-4659.

Specialists at the Helpline can provide the following types of help:

- **Current HIV/AIDS information**
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The Aids Helpline, a free service of the Delta Region AIDS Education and Training Center (ETC), is available to all health professionals in **Louisiana, Mississippi and Arkansas**, including nurses, physicians, dentists, social workers, psychologists, infection control specialists, and health administrators.



# CME Opportunities

## University of Mississippi Medical Center October

**Pediatric Fall Meeting - New Age in Pediatrics** - October 10-11, Ramada Renaissance Hotel and **Pediatric Advanced Life Support Provider Course**, October 23-24, University Medical Center.

## November

**Advanced Trauma Life Support Provider Course** November 7-8, University Medical Center; **Perinatal Postgraduate Course**, November 7-8, Ramada Renaissance Hotel, and **AIDS Update 1991** November 20-21, University Medical Center.

## December

**Sleep Symposium: Recent Advances in Sleep Disorders**, December 6, Holiday Inn Medical Center. For more information or a program brochure, contact the Division of Continuing Health Professional Education, University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505; or call (601) 984-1300. Fax (601) 984-1309.

## Medical Symposium Scheduled For November 7 in Hattiesburg

Thursday, November 7, 1991, Hattiesburg Clinic, PA and Forrest General Hospital will host a one-day medical symposium for physicians. Five speakers will present talks in the area of cardiology, infectious diseases and endocrinology.

Speakers include Robert L. Rinkenberger, Director of Electro-cardiography and Co. Director of Electro-Physiology Laboratory, University of Texas Medical School, Houston, TX; Stanley Chapman, MD, Director of the Infectious Disease Division and Professor of Medicine at UMC; Ralph C. Kahler, MD, infectious disease specialist, Hattiesburg Clinic; Sherry A. Martin, Ochsner Medical Foundation Endocrinology and Metabolism Fellowship and internal medicine specialist, Hattiesburg clinic; and Thad F. Waites, MD, cardiologist, South Mississippi Heart Institute.

The symposium will begin at 8:30 a.m. and conclude by 4:45 p.m. at Forrest General Hospital, 400 S. 28th Avenue, Hattiesburg. This symposium is offered at no cost to physicians. Appropriate credit has been applied for with AAFP and AMA Category I. Registration information and a description brochure may be obtained by calling (601) 268-5606.

# Southeast CME Symposium

## Accrediting the Accreditors

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Louisiana State Medical Society  
Medical Association of the State of Alabama  
The Mississippi State Medical Association

**November 8, 1991**

**8:30 am - 3:30 pm**

**Mississippi Beach Resort Hotel  
Biloxi, Mississippi**

### *Sponsored By:*

**Memorial Hospital at Gulfport**

### *Speakers Include:*

George D. Oetting, EdD, Chairman: Committee for Review and Recognition of the Accreditation Council for Continuing Medical Education.

Arthur M. Osteen, PhD, Director: Office of Physician Credentials and Qualifications, American Medical Association, Chicago, IL.

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See adjacent page for references and brief summary  
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**Indications and Usage:** 1. *Active duodenal ulcer*—for up to 8 weeks of treatment. Most patients heal within 4 weeks.

2. *Maintenance therapy*—for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than 1 year are not known.

**Contraindications:** Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H<sub>2</sub>-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H<sub>2</sub>-receptor antagonists.

**Precautions:** General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.  
3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

**Laboratory Tests**—False-positive tests for urobilinogen with Multistix® may occur during therapy.

**Drug Interactions**—No interactions have been observed with theophylline, chlorazepate, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

**Carcinogenesis, Mutagenesis, Impairment of Fertility**—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid. Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

**Pregnancy—Teratogenic Effects—Pregnancy Category C**—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers**—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

**Pediatric Use**—Safety and effectiveness in children have not been established.  
**Use in Elderly Patients**—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (11% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

**Hepatic**—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

**Cardiovascular**—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

**CNS**—Rare cases of reversible mental confusion have been reported.  
**Endocrine**—Clinical pharmacology studies and controlled clinical trials showed no evidence of antandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

**Hematologic**—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H<sub>2</sub>-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

**Integumental**—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

**Hypersensitivity**—As with other H<sub>2</sub>-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

**Other**—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

**Overdosage:** Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

**References**

1. Data on file, Lilly Research Laboratories

2. *Scand J Gastroenterol* 1987;22(suppl 136):61-70.

3. *Scand J Gastroenterol* 1987;22(suppl 136):47-55.

4. *Am J Gastroenterol* 1989;84:769-774.

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## New Members

**Akin, Kathryn B.**, Long Beach. Born Houston, TX, November 10, 1957; MD Baylor College of Medicine, Houston, TX 1984; interned and pediatric residency Marshall University, West Virginia 1984-89; elected by Coast Counties Medical Society.

**Beam, J Stephen**, Hattiesburg. Born Itawamba County, MS, July 7, 1950; MD University of Mississippi School of Medicine, Jackson, MS, 1984; interned and occupational medicine residency, Medical College of Wisconsin, Milwaukee, Wisconsin 1984-87; elected by South Miss Medical Society.

**Bell, David W.**, Tupelo. Born Pine Bluff, AK, August 25, 1953; MD University of Arkansas College of Medicine, Little Rock, AK, 1981; interned and family practice residency, University of Tennessee & St Francis Hospital, Memphis, TN 1981-84; elected by Northeast Miss Medical Society.

**Bennett, William G.**, Lucedale. Born Lucedale, MS, September 21, 1959; MD University of Mississippi School of Medicine, Jackson, MS, 1984; interned and internal medicine residency, University of Arkansas, Little Rock, AK, 1984-87 and internal medicine residency UCLA, 1987-89; elected by South Miss Medical Society.

**Brown, Bradley P.**, Columbus. Born Columbus, MS, March 25, 1958; MD University of Mississippi School of Medicine, Jackson, MS, 1984; interned and internal medicine residency, Baptist Memorial Hospital, Memphis, TN, 1984-87; elected by Prairie Medical Society.

**Brunson, Claude D.**, Jackson. Born Tuskegee, AL, November 20, 1957; MD University of Alabama School of Medicine, Birmingham, AL, 1987; interned one year, Baptist Medical Centers, Birmingham, AL; anesthesiology residency, University Medical Center, Jackson, MS, 1988-91; elected by Central Medical Society.

**Bouldin, Marshall J., IV**, Tupelo. Born Memphis, TN, April 6, 1960; MD Johns Hopkins University School of Medicine, Baltimore, MD, 1988; interned and internal medicine residency, University of Virginia, Charlottesville, VA, 1988-91; elected by Northeast Miss Medical Society.

**Coleman, Sidney A., Jr.**, Jackson. Born Kosciusko, MS, January 24, 1925; MD Tulane University School of Medicine, New Orleans, LA, 1952; interned one year St Joseph Hospital, Ft Worth, TX; pathology residency, University of Tennessee, Memphis, TN, 1953-57; elected by Central Medical Society.

**Downing, Deborah J.**, Jackson. Born Lafayette, LA, October 16, 1960; MD University of Mississippi School of Medicine, Jackson, MS, 1987; interned and pediatric residency University Medical Center, Jackson, MS, 1987-91; elected by Central Medical Society.

**Gordon, David Lee**, Jackson. Born Chicago, IL, March 31, 1960; MD University of Miami School of Medicine, Miami, FL, 1985; interned one year St Luke's Roosevelt Hospital Center, New York, NY; medicine residency Mt Sinai Medical Center, New York, NY, 1986-89; neurology fellowship University of Iowa, Iowa City, IA, 1989-91; elected by Central Medical Society.

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**Grantham, William M.,** McComb. Born Hattiesburg, MS, January 20, 1961; MD University of Mississippi School of Medicine, Jackson, MS 1988; interned and family practice residency, University of South Alabama, Mobile, AL, 1988-91; elected by South Central Medical Society.

**Henderson, Harold M.,** Jackson, MS. Born Clarksdale, MS, April 6, 1956; MD Louisiana State University School of Medicine, New Orleans, LA, 1984; interned and medicine residency, University of Alabama, Birmingham, AL, 1984-87; infectious disease fellowship, University of Cincinnati, Cincinnati, OH, 1987-91; elected by Central Medical Society.

**Kamp, Peter S.,** Hattiesburg, MS. Born Little Rock, AK, July 12, 1960; MD University of Oklahoma College of Medicine, Oklahoma City, OK, 1986; interned and psychiatry residency Georgetown University Hospital, Washington, DC, 1986-90; consultation-liaison psychiatric fellowship, Fairfax Hospital, Washington, DC, 1990-91; elected by South Miss Medical Society.

**Langston, James W.,** Natchez. Born Daytona Beach, FL, December 20, 1938; MD Tulane University School of Medicine, New Orleans, LA, 1963; interned one year Charity Hospital, New Orleans, LA; urology residency, Ochsner Foundation Hospital, New Orleans, LA, 1966-70; elected by Homochitto Valley Medical Society.

**Little, Diane M.,** Hattiesburg. Born Chicago, IL, August 27, 1958; MD University of Kentucky College of Medicine, Lexington, KY, 1986; interned one year University of Kentucky, Lexington, KY; psychiatry residency and child/adolescent psychiatry, University of Kentucky Medical Center, Lexington, KY, 1987-91; elected by South Miss Medical Society.

**Low, Annette K.,** Vicksburg. Born Sydney, Australia, July 20, 1963; MD Johns Hopkins University School of Medicine, Baltimore, MD, 1988; interned one year University Hospitals in Cleveland, OH; medicine residency University of Virginia Medical Center, Charlottesville, VA, 1989-91; elected by West Miss Medical Society.

**McDonald, Edward F., Jr.,** Meridian. Born Jackson, MS, March 7, 1950; MD University of Mississippi School of Medicine, Jackson, MS, 1985; interned one year University Medical Center, Jackson, MS; elected by East Miss Medical Society.

**Morton, Allen R.,** Jackson. Born New Albany, MS, October 7, 1954; MD University of Mississippi School of Medicine, Jackson, MS, 1987; interned and anesthesiol-

ogy residency University Medical Center, Jackson, MS, 1987-91; elected by Central Medical Society.

**O'Cain, Debbie T.,** Tupelo. Born Ripley, MS, February 5, 1955; MD University of Mississippi School of Medicine, Jackson, MS, 1988; interned and family practice residency University of Tennessee, Memphis, TN, 1988-91; elected by Northeast Miss Medical Society.

**Perry, W. Doug,** McComb. Born Tuscaloosa, AL, January 10, 1960; MD University of Mississippi School of Medicine, Jackson, MS, 1988; interned and medicine residency University of South Alabama, Mobile, AL, 1988-91; elected by South Central Medical Society.

**Roy, Elizabeth N.,** Vicksburg. Born Jackson, MS, May 11, 1951; MD University of Mississippi School of Medicine, Jackson, MS, 1988; interned and pediatric residency University Medical Center, Jackson, MS, 1988-91; elected by West Miss Medical Society.

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**Sassone, Randy E.**, Vicksburg. Born May 16, 1951; MD Louisiana State University School of Medicine, New Orleans, LA, 1987; interned and anesthesiology residency Charity Hospital, New Orleans, LA, 1987-91; elected by West Miss Medical Society.

**Schwartz, Alan C.**, McComb. Born Mobile, AL, December 1, 1961; MD University of Mississippi School of Medicine, Jackson, MS, 1988; interned and family practice residency University of South Alabama, Mobile, AL, 1988-91; elected by South Central Medical Society.

**Subramony, S. H.**, Jackson. Born India, December 1, 1947; MD Delhi University, Delhi, India 1971; interned one year Memorial Hospital, Berwyn, IL, 1974-75; neurology residency, Cleveland Clinic, Cleveland, OH, 1975-79; elected by Central Medical Society.

**Turner, William S.**, Hattiesburg. Born Hattiesburg, MS, April 21, 1952; MD University of Mississippi School of Medicine, Jackson, MS, 1980; interned one year University Medical Center, Jackson, MS, 1980-81; psychiatry residency University Medical Center, Jackson, MS, 1988-91; elected by South Miss Medical Society.

**Webre, Donald Ray**, Jackson. Born Baton Rouge, LA, July 26, 1943; MD Louisiana State University School of Medicine, New Orleans, LA, 1969; interned one year Earl K. Long Memorial Hospital, Baton Rouge, LA; anesthesiology residency Ochsner Foundation Hospital, New Orleans, LA, 1970-73; elected by Central Medical Society.

**Wheeler, Brent R.**, Hattiesburg. Born Ashland, KY, July 21, 1960; MD University of Louisville School of Medicine, Louisville, KY, 1986; interned and surgery residency University of Louisville Affiliated Hospitals, Louisville, KY, 1986-91; elected by South Miss Medical Society.

**Wilton, Peter B.**, Jackson. Born Johannesburg, South Africa, March 11, 1956; MD Medical School University of the Witwatersrand, Johannesburg, South Africa 1980; interned and surgery residency University of Minnesota Medical School, Minneapolis, MN, 1982-89; elected by Central Medical Society.

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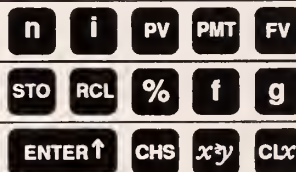
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## Personals

**Paul M. Allen** of Pascagoula will present a paper at the upcoming 12th annual meeting of the American Urogynecologic Society in Newport Beach, CA, on Oct. 23-25.

**Patricia Dugger Allred** has associated with Jackson Anesthesia Associates, P.A., Jackson, for the practice of anesthesiology.

**Julius A. Bosco, Jr.** has joined the Woman's Clinic in Pascagoula for the practice of obstetrics and gynecology.

**Marshall J. Bouldin, IV** has associated with Internal Medicine Associates, 845 South Madison Street, Tupelo, MS, for the practice of internal medicine.

**Richard D. Celentano** announces the opening of Plastic and Reconstructive Surgery Associates, 103 Aldersgate Circle, Methodist Medical Park, Hattiesburg, MS 39402 and 912 Sumrall Rd., Columbia.

**Robert C. Clingan** has associated with Wayne M. Pitre, M.D., P.A., in the practice of Dermatology, located at 1202 Mission Park Drive, Vicksburg.

**Cal Durel**, an anesthesiologist, has joined the Singing River Hospital medical staff.

**Robert Coltharp** of Hattiesburg recently conducted an educational workshop on *Endoscopic Sinus Surgery*, at the 23rd Annual National Conference of the Association of Surgical Technologists, held in New Orleans.

**Richard Conn** of Hattiesburg recently conducted an educational workshop on *Arthritic Joint Replacement Surgery*, at the 23rd Annual National Conference of the Association of Surgical Technologists, held in New Orleans.

**Dean Cromartie** of Hattiesburg recently conducted an educational workshop on *Advanced Development in Surgical Treatment for Infertility and Endometriosis*, at the 23rd Annual National Conference of the Association of Surgical Technologists, held in New Orleans.

**J. P. Culpepper, III**, of Hattiesburg recently conducted an educational workshop on *Treatment of Chest Diseases*, at the 23rd Annual National Conference of the Association of Surgical Technologists, held in New Orleans.

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**Larry Day** of Hattiesburg recently conducted an educational workshop on *Facial Plastic Reconstruction Following Cancer Resection*, at the 23rd Annual National Conference of the Association of Surgical Technologists, held in New Orleans.

**Charles W. Emerson, Jr.** announces his office relocation to 379 Medical Drive, Jackson, MS.

**Lewis Hatten** of Hattiesburg recently conducted an educational workshop on *Intraoperative Angioplasty and Angiography*, at the 23rd Annual National Conference of the Association of Surgical Technologists, held in New Orleans.

**Michael G. Howell** announces the opening of The Tishomingo Medical Center for the practice of family medicine, at 1521 Natchez Street, Tishomingo, MS.

**Ben J. Kitchings** announces the association of **Ronald W. Bradshaw** and the formation of Coast Family Physicians, P.A., at 300 East Fifth Street, Long Beach, MS.

**William F. Krooss** and **Michael H. Albert** announce the opening of Florence Family Doctors, at Country Village Shopping Center, Florence, MS.

**William E. Lotterhos** of Jackson was recently featured in an article entitled, *-A Very Special Doctor in Jackson -* printed in the United States Military Entrance Processing Command newspaper, *The Messenger*.

**Annette K. Low** has associated with The Street Clinic, Vicksburg in the practice of Internal Medicine.

**Michael W. Lowery** announces the opening of his office for Neurological Surgery at 1020 Adams Street, Laurel, MS.

**Ronald R. Lubritz** announces the opening of his office for Diseases and Tumors of the Skin, at 1020 Adams Street, Laurel, MS.

**George McGee** of Hattiesburg recently conducted an educational workshop on *Laparoscopic Surgery: The 21st Century is Here*, at the 23rd Annual National Conference of the Association of Surgical Technologists, held in New Orleans.

**Scott Harris McPherson**, on the medical staff of St. Dominic's Hospital in Jackson gave a presentation on *Musculoskeletal MRI* at St. Bartholemew's Hospital in London.

**Toxey Morris** of Hattiesburg recently conducted an educational workshop on *Update in Urologic Technology*, at the 23rd Annual National Conference of the Association of Surgical Technologists, held in New Orleans.

**Ronnye D. Purvis** announces the opening of his practice in Gynecology and Obstetrics at 1411 - 22nd Avenue, Meridian.

**Robert L. Russell** of Wiggins has associated with Thais Emily Brown and Larry W. Sivils of the Ridgeland Family Medical Center for the practice of family medicine.

**F. H. Savoie** of Jackson, was visiting professor at the University of Alabama in Mobile during July making presentations on disorders of the shoulder and elbow. He was also a guest speaker at two meetings held during August in Florida. Dr. Savoie spoke at a shoulder seminar on *Instability, Rotator Cuff Pathology* and at a meeting on osteoarthritis on *Osteoarthritis of the Shoulder*.

**Randy E. Sassone**, an anesthesiologist has joined the Vicksburg Medical Center and Vicksburg Clinic in the Department of Anesthesiology.

**Joseph D. Siefler** of Meridian, an otolaryngologist, has joined the staff of Laird Hospital at Union

**J. Kim Sessums** of Brookhaven has recently been elected to the Trustmark National Bank, Brookhaven, Advisory Board.

**Phillip A. Snodgrass** announces the opening of his office for general surgery at the Medical Plaza, 1002 E. Madison, Houston, MS.

**Barry S. Sullivan** has associated with Internal Medicine Associates of Oxford in the practice of internal medicine.

**Catherine A. Thompson** has associated with the Hattiesburg Clinic, in the practice of family medicine at Wiggins Clinic.

**J. Michael Weaver** of Hattiesburg recently was certified as a Diplomate of the American Board of Orthopaedic Surgery.

**Mark C. Webb** has associated in partnership with George D. Ladner, Rodrigo M. Galvez, Benjamin A. Root, Jr., and James A. Stary, of the Mississippi Neuropsychiatric Clinic, 1030 Riverside Plaza, Jackson, MS, in the practice of psychiatry.

**Charles H. Williams** of Jackson has associated with the Charleston Clinic, Charleston, for the practice of family medicine.

**E. Greg Wood, III** has associated with **J. Patrick Barrett** and Mississippi Spine & Orthopedic Clinic for the practice of Lumbar & Cervical Spine Surgery, Spinal Trauma and Adult Orthopedics, Jackson.



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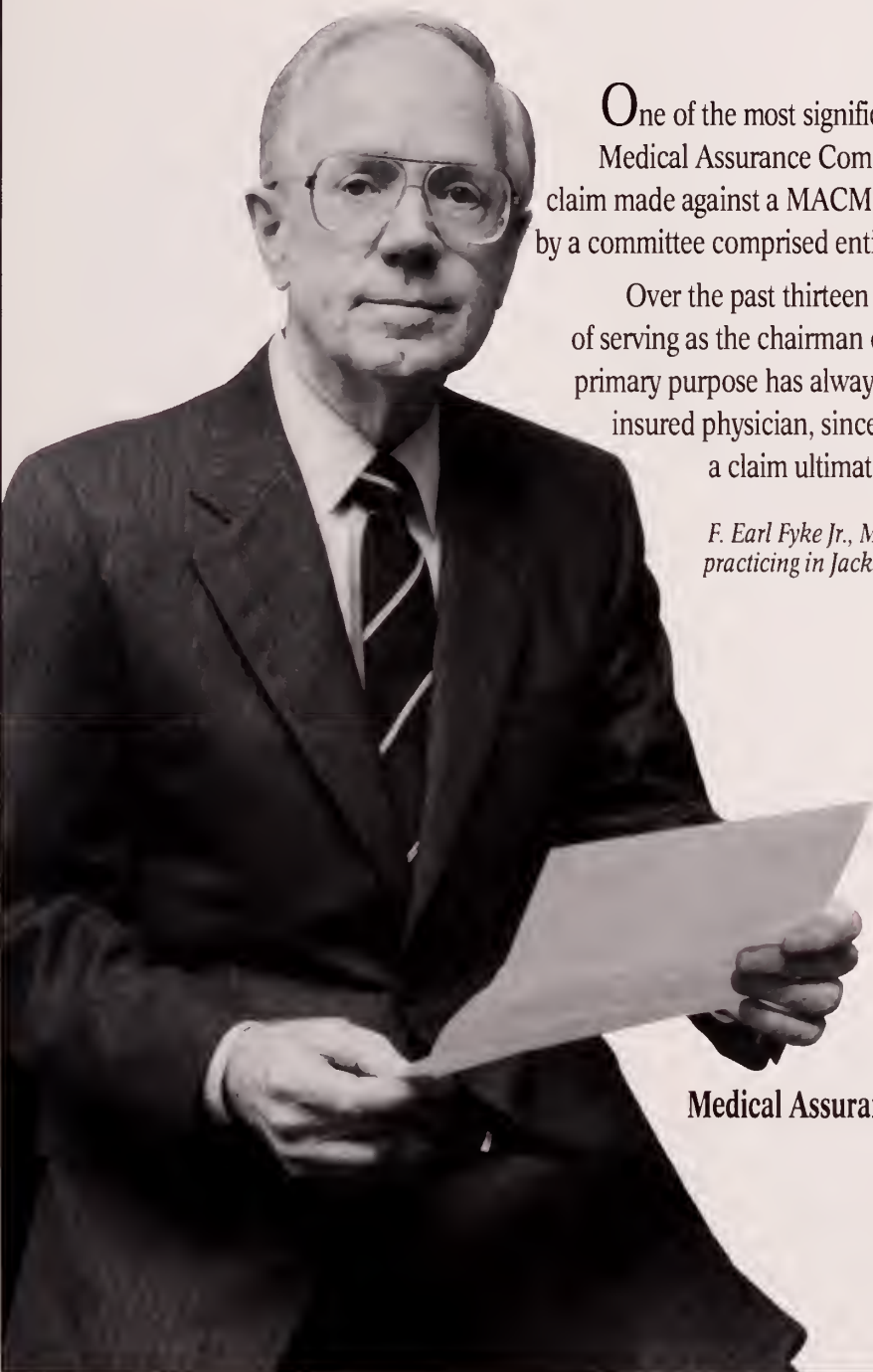
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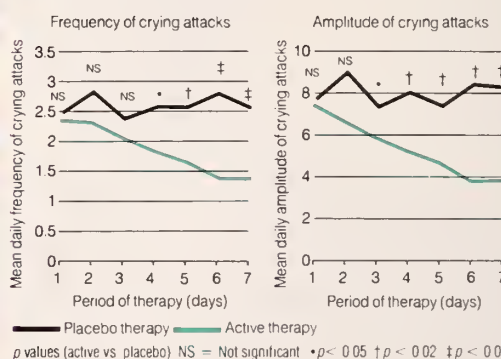
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# JOURNAL

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INITIAL ASSESSMENT OF A RAPE

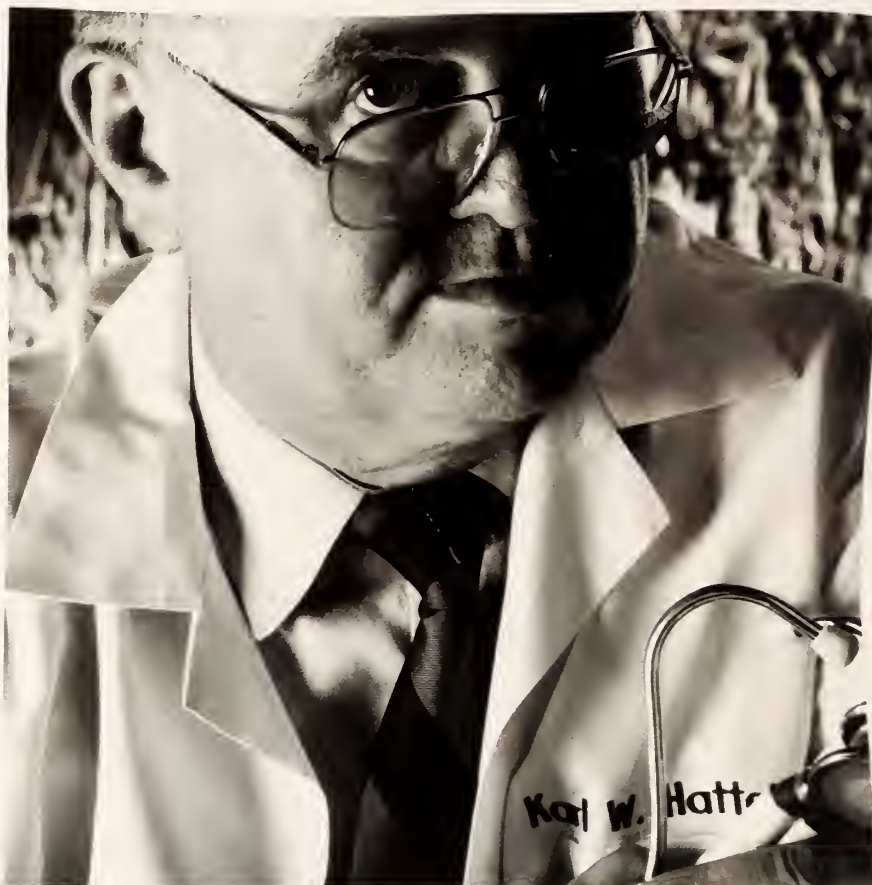
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OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

NOVEMBER 1991

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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 11

November 1991

Dear Doctor:

The **Mississippi Polio Survivors Association (MPSA)** is seeking physicians who have knowledge of **Post-Polio Syndrome (PPS)** and who are interested in treating persons who have had polio and may be experiencing any or all of the numerous symptoms of PPS.

The MPSA also offers a free packet of Journal articles and other pertinent information to any interested physician. For more information contact: Barbara Robinson, President, MPSA, PO Box 314, Sumner MS 38957 or call (601) 375-8903.

The National Center for Health Statistics is conducting a major study of the health of persons living in the United States aged two months and older. **Jackson County** and **Montgomery County, Mississippi** have been selected as survey locations during the third National Health and Nutrition Examination Survey. This survey is part of the U.S. Public Health Service's continuing study of the Nation's health. During the past 27 years, similar surveys have been successfully conducted on health conditions and concerns in this country. Data are collected through household interviews and standardized medical examinations in mobile examination centers. The survey will be conducted in Jackson County from November 1, 1991 through January 18, 1992. A sample of 453 people from Jackson County will be asked to participate in the survey. In Montgomery County a sample of 429 people will be selected and asked to participate November 27, 1991 through February 8, 1992.

## **MARK YOUR CALENDAR !!**

**The MSMA Medical Socioeconomic Forum and Legislative Reception will be held January 21, 1992 at the Coliseum Ramada Inn, Jackson, MS.**

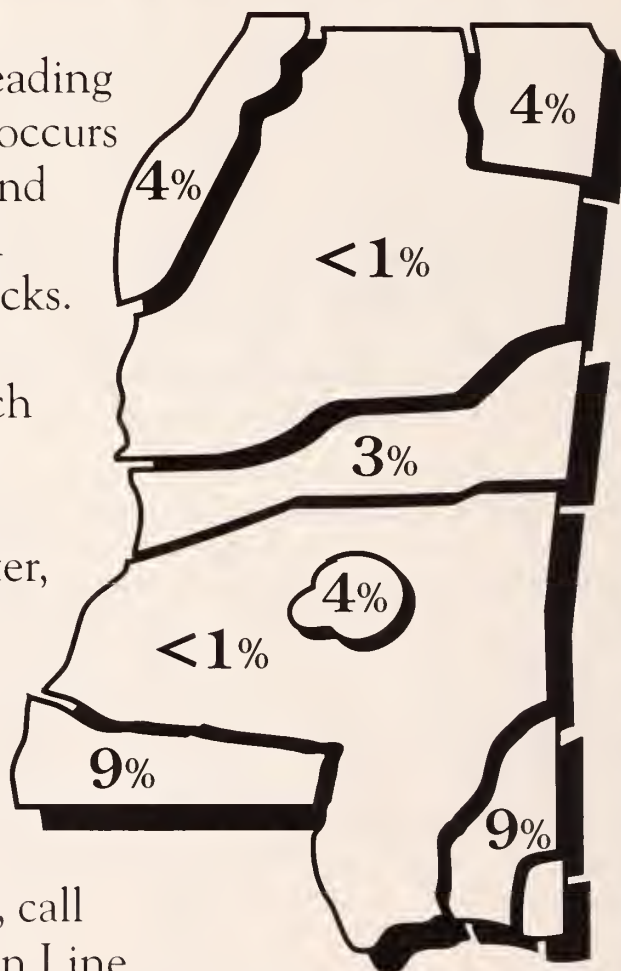
**The 124th MSMA Annual Session will be held, April 29 - May 3, 1992, at the Ramada Renaissance Hotel, Jackson, MS.**



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# Dateline

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 11

## Campaign Against Family Violence

Chicago, IL - With family violence reaching epidemic proportions in America, the American Medical Association is joining hands with local medical societies to help physicians identify and aid victims of domestic violence. "The FBI estimates that domestic violence touches as many as one forth of all American families," said AMA Vice Chairman Robert McAfee, MD. A 1981 survey of married Americans showed that up to six out of 10 couples have experienced violence at some time during the marriage, with husbands beating wives or even wives beating husbands. Domestic violence has strong medical consequences. According to the August 1991 *Journal of the American Medical Association*, so many women seek medical attention for injuries resulting from domestic violence, that it is the largest cause of injury to women in the U.S.

## Health and Safety Survey

Jackson, MS - The Mississippi State Department of Health is conducting monthly statewide surveys on the health and safety practices of people in Mississippi. The survey -- which began in 1990 -- is part of the Behavioral Risk Factor Surveillance System (BRFSS). Thirty-nine states and Washington, DC, participate in the survey each year.

Survey coordinator Ellen Jones, director of health promotion and education for MSDH, said survey results will help target health education activities to people with greatest needs. Knowing about people's health and safety practices will also help identify better ways to reach those target audiences. Survey results will keep public health professionals posted on trends in health behaviors.

Each month, surveyors telephone 130 adult Mississippians. They ask questions about health behaviors such as smoking, seat belt use, child safety, and nutrition. The questions, Jones said, "relate to preventable illness and death, which are related to life-style." The random survey involves calls -- which take about 10 minutes each -- during the day, evening, and weekend hours to get an adequate, accurate sampling. No names are used, and all answers are kept confidential.

Jones said the Center for Disease Control in Atlanta pays for BRFSS. MSDH contracted with Southern Research Group to conduct the monthly surveys and trained all interviewers. "All the 1990 data has been compiled, and we should have a final report ready by the end of the year," Jones said. "We can use that report to target risk reduction activities in the state." Jones said the study allows comparisons among regions within the state as well as other states.

For more information about the survey, readers may call Ellen Jones at 960-7499 or the Office of Health Communications and Public Relations, 960-7667.





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# Human Disease Caused by Dog Heartworm

JOANNA WATSON, MD  
WILLIAM J. WETZEL, MD  
JAMES BURKHALTER, MD

*Dirofilaria immitis*, more commonly known as the dog heartworm, can occasionally infect man, leading to pulmonary dirofilariasis (P.D.). This is important clinically because it masquerades as primary or metastatic lung cancer. *D. immitis* infection is present throughout most of the temperate, tropical, and subtropical areas of the world and appears to be increasing in incidence. In the United States, it is most prevalent in the South and Southeast.

Normally, the infective filarial larvae are transmitted from dog to dog by mosquitoes. Within the canine tissues, the larvae develop into the sexually mature form of the worm. The worms then migrate through the blood until reaching the right ventricle. Here the worms continue to multiply, until the dog eventually dies from right sided heart failure.

It is possible for a mosquito to transmit the larvae from an infected dog to a human. Because humans provide an unsuitable host environment, however, the larvae usually die within the subcutaneous tissue at the site of inoculation. Rarely, the larvae reach the right ventricle before dying and become passively transported to the lung. This causes embolization of one of the small or medium pulmonary arteries with infarction and typically presents radiographically as a "coin lesion" in the lung. Although this is a self-limited process, it takes on clinical importance since it is often mistaken for a neoplastic process requiring thoracotomy for diagnosis.<sup>1</sup>

During the past fourteen months, three cases of P.D. have been diagnosed at the Mississippi Baptist Medical Center in Jackson. Diagnosis was made at

the time of open lung needle biopsy in one case, and at frozen section after excisional biopsy in two cases. These cases are briefly reviewed.

### CASE REPORTS

**Case #1:** A forty-eight year old female from Pickens, MS, presented with complaints of vague anterior chest wall pain for one month duration. She had no previous history of smoking, shortness of breath, hemoptysis, or cough. Past medical history was negative. Chest x-ray revealed a 2 cm. noncalcified solitary pulmonary nodule in the right upper lobe. She was admitted for thoracotomy. CT scan of the chest was performed which revealed a single lesion in the right upper lobe adherent to the pleura; no mediastinal adenopathy was present. Aspiration biopsy of the lesion was nondiagnostic. No lesions were identified by fiber-optic bronchoscopy. A right thoracotomy with frozen section was performed. Peripheral blood count was not available.

**Case #2:** Sixty-seven year old female from McComb, MS, was admitted for cardiac catheterization to further evaluate her recent onset of angina. A routine chest x-ray prior to catheterization revealed a 2.5 cm. noncalcified nodule in the right upper lobe. CT of the chest demonstrated a 2 cm. x 2 cm. mass in the right lung, but no adenopathy in the hilum or mediastinum. Pathology specimens obtained during fiber-optic bronchoscopy were negative. CBC with differential revealed 3% peripheral eosinophilia. Initial clinical



impression was that of metastatic carcinoma vs. granuloma. Diagnosis was made at the time of coronary artery bypass surgery by open lung needle biopsy of the right lung mass.

**Case #3:** A forty-nine year old female from Forest, MS., presented with complaints of dizziness, vague chest pains, and arm numbness intermittently over the past two years. Chest x-ray revealed a noncalcified 1.1 cm. right lower lobe solitary pulmonary nodule not previously identified in old chest x-rays. She was admitted for thoracotomy. Preliminary fiber-optic bronchoscopy was negative. CT of the chest confirmed this noncalcified lesion in the anterior segment of the right lower lobe. Peripheral blood count with differential showed 3% eosinophils. A right thoracotomy with frozen section was performed.



*Figure 1: Chest x-ray showing 2.0 x 2.5 CM. "coin lesion" in right upper lobe of the lung (case #2).*

## RADIOLOGY

The radiologic findings are fairly typical, but nondiagnostic. They usually consist of noncalcified, discrete single peripheral pulmonary nodules ranging in size from 1 to 4.5 cm. in diameter. They are frequently pleural-based since they represent a spherical

subpleural infarct. The lesions usually remain radiographically stable, after developing a nodule in an area of pneumonia-like infiltrate. This infiltrate is seldom seen, since the nodule is usually an incidental finding on a chest radiographic obtained for some other reason. The radiologic differential diagnosis includes primary and metastatic malignancies, benign tumors, evolving pulmonary infarcts, and infectious etiologies.

A summary of the radiographic findings from these 3 cases includes:

**Case #1:** 2.0 CM. noncalcified solitary right pulmonary nodule.

**Case #2:** 2 CM. x 2.5 CM. noncalcified pleural-based right upper lobe pulmonary nodule without adenopathy or effusion.

**Case #3:** 1.1 CM. noncalcified solitary pulmonary nodule in the right lower lobe without adenopathy or effusion.

Two of these had transpleural needle biopsy of the mass, without definitive diagnosis.



*Figure 2: CT scan of the chest revealing dog heartworm granuloma (case #2).*



*Figure 3: Transverse section of dog heartworm within pulmonary vessel (case #1).*



## **PATHOLOGY**

Histologically, there is abundant necrotic debris compatible with an infarct. Surrounding this is a granulomatous response with histiocytes and giant cells. Recognizable parasites are seen in a minority of sections and are pathognomonic. If the parasites are not seen, the major differential diagnoses are infectious granulomas and Wegener's granulomatosis.

## **SUMMARY**

Pulmonary infection with *D.immitis* is an infrequently reported cause of lung disease in humans. Approximately 80 cases have been reported in the United States, with increasing numbers reported in recent years. The largest single series from one institution is a series of 6 patients from Ochsner Clinic in New Orleans, Louisiana. Although our series consisted of 3 females and no males, the disease is detected and diagnosed in males twice as often.<sup>2,3,4</sup> The usual age range is 40 to 60 years. No case has yet been seen in children.<sup>2</sup> Unfortunately, it is essentially impossible to diagnose by clinical means. The definitive diagnosis can be made quite easily, however, by histologic examination which reveals the worm within the lesion. It should be noted that the parasites are seen in a minority of sections; therefore, diagnosis may be missed. As a result, given the setting of pulmonary infarction with granulomatous response, multiple sections of the lesion should be examined.

Other larval worms also occurring in the lung which might be confused with *D.immitis* include *Enterobius vermicularis*, *Wuchereria bancrofti*, *Brugia malayi*, and *Onchocerca volvulus*. These, however, are much less common and are morphologically distinct from *D.immitis*. Also, it is easily distinguished from ascarids, strongyloids, and hookworm larvae which are much smaller than the dirofilarial worms and do not contain reproductive organs.<sup>5</sup> In North American, the occurrence of fragments of nematode within a pulmonary infarct is essentially pathognomonic for PD.

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Jackson, MS 39202-2002

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*Drs. Watson and Wetzel are with the Department of Pathology, Mississippi Baptist Medical Center, and Dr. Burkhalter is associated with the Radiological Group, P.A., Jackson, MS.*

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# Initial Assessment of the Rape Victim

DIANE K. BEEBE, MD

Rape is not an expression of sexuality - it is a violent crime. Nationally, sexual assault is reported to be the fastest growing violent crime.<sup>1,2</sup> It affected 141,000 households in the United States in 1988.<sup>3</sup> In Mississippi over 800 victims of rape and sexual assault were served by rape crisis projects from October of 1988 to September 1989. In addition to the direct counseling, follow up services were provided to 1,629 victims and their families.<sup>4</sup> Although these statistics are alarming, they may be underestimated because of the fear of women to report the crime. Many women fail to seek proper medical care for fear of humiliation.

In the United States, only slightly more than half of all rape victims who report an injury receive medical care. The majority are treated in hospital emergency rooms.<sup>5</sup> Comprehensive care of the victim requires a detailed history, a careful physical exam, a thorough assessment of the patient's psychological state, attention to preventing venereal disease and pregnancy, and a collection of medical evidence.<sup>2</sup> The determination of whether a rape has occurred is the duty of the court and not the physician.<sup>2,6</sup>

## MEDICAL ASSESSMENT

The patient, on arrival to the emergency room, should be taken to a private, quiet, comfortable room. A family member, friend, rape crisis counselor, or specially trained social worker should stay with the patient and bring her a change of clothes. The patient's consent for examination and evidence collection should be obtained.<sup>2,7,8,9</sup>

## HISTORY

The history should relate information pertinent to the

event in the victim's own words without being overly detailed. Any information that contradicts later court testimony will hinder the victim's case.<sup>2</sup> Questioning should be specific without being judgmental, moralistic, or opinionated since victims often feel to blame for the incident.<sup>7,8,9</sup> Important information includes the ages and identifying characteristics of the victim and the alleged rapist, the date and time of the assault and the examination, and the circumstances and details of the assault. This should include types of intercourse performed, whether ejaculation or urination occurred and whether there was any use of restraints, weapons, or drugs. Additionally, a thorough gynecologic history is important, including contraceptive use and the victim's date of last voluntary intercourse. The activity of the victim after the assault regarding changing clothes, bathing, douching, or urinating should be recorded.

## GENERAL APPEARANCE

The physical examination should assess physical injuries while collecting submissible evidence. Evidence should be collected even if the victim is undecided regarding criminal prosecution since after forty-eight to seventy-two hours of the incident, evidence is often unrecoverable and invalid.<sup>7,8</sup>

The victim alone should handle her clothes, if possible, to avoid contamination. Disrobing while standing on examination table paper will catch any falling debris, hair, or fibers. All clothes should be placed in paper bags since bacterial growth may occur on blood or semen stains stored in plastic bags.<sup>2,8</sup> Any abrasions, bruises, or lacerations should be noted. Diagrams and photographs are appropriate and useful for documentation. With the exception of the genital area,



the most common sites of trauma are the mouth, throat, wrists, arms, breasts and thighs.<sup>2</sup>

## PELVIC EXAM

On external examination of the perineum and inner thighs, areas of blood or semen will fluoresce with a Wood's light. These areas should be swabbed with saline-moistened cotton swabs. Pubic hair should be combed over a sheet of paper to yield foreign material that may be identifiable to the assailant.

The speculum for the vaginal examination should be moistened only with water since lubricants may interfere with wet mounts as well as be spermicidal. The condition of the hymen and any abrasions or lacerations of the vaginal walls or cervix should be noted.

## LABORATORY ANALYSIS

### Vaginal Secretions

Aspiration of vaginal fluid, after instillation of 10cc's of normal saline if needed, is performed from the posterior fornices.<sup>2,8</sup> The motility and number per high power field of motile sperm, which can be seen on a wet-mount sperm examination for approximately three hours after ejaculation, should be documented.<sup>1,8,10</sup> Non-motile sperm may remain in the genital tract for up to seventy-two hours after intercourse. Absence of sperm may be due to vasectomy or sexual dysfunction of the assailant, which can occur in up to fifty percent of cases.<sup>1</sup> Analysis of vaginal aspirate should also include those items listed in Table I.<sup>1,10</sup> The oral cavity and anal area should also be swabbed, if appropriate to determine the presence of sperm and acid

phosphatase.

### Cultures

Cultures for gonorrhea and chlamydia should be obtained from any orifice of penetration based on the assault history. Herpetic cultures of existing lesions are useful only to document pre-existing disease.

### Pregnancy

Pregnancy occurs in approximately five percent of fertile female rape victims.<sup>7</sup> A serum human chorionic gonadotropin beta subunit assay should be performed to determine pre-existing pregnancy, and pregnancy prophylaxis offered to the victim within seventy-two hours. One accepted method is to prescribe two tablets of an ethinyl estradiol-norgestrel combination oral contraceptive (Ovral) as an initial dose followed by two tablets in twelve hours.<sup>2,7,8,11</sup> The patient should understand the one percent failure rate and teratogenicity of postcoital medications.<sup>7</sup>

### STD's

The overall risk of acquiring a sexually transmitted disease as a result of rape is estimated at five to ten percent.<sup>7</sup> A baseline RPR or VDRL should be performed and repeated in three months.<sup>2</sup> HIV testing is controversial but should be discussed with the patient. If desired, a baseline test is performed, and if negative, repeated in three to six months.<sup>7</sup> The risk of HIV transmission in a single sexual encounter and the length of time that a person is infected with HIV before antibody is detectable is unknown. Current data suggests that of those persons exposed to HIV, ninety-five percent will develop antibodies within six months.<sup>12</sup> Treatment of sexually transmitted diseases involves administration of 250 mg intramuscularly of Ceftriaxone, followed by seven days of either 100 mg of Doxycycline twice a day or Tetracycline HCL in a dose of 500 mg orally four times a day.<sup>13</sup>

### Handling of Evidence

Rape kits are available from forensic crime labs at a variety of costs. Items to be collected in the standard rape kit for the Jackson Crime Lab are listed in Table II. All specimens should be sealed, dated, and kept in a locked box in the emergency room before being transported to a crime lab by a police officer. To ensure that materials are not altered prior to submission in a court of law, each step of evidence collection should be documented by the nurse, physician, law enforcement officer, and lab technician who collected and handle the specimens.<sup>1</sup>

Table I: ANALYSIS OF VAGINAL ASPIRATE

Examination	Implication
wet-mount sperm exam	Motile sperm seen within 3 hrs. of ejaculation <sup>1</sup> Non-motile sperm may be seen up to 72 hrs. <sup>1</sup>
acid phosphatase	enzyme activity high after recent coitus - absent after 24 hrs. <sup>1,12</sup>
semen-specific marker p30	presence indicates sexual activity within 48 hrs. <sup>1,12</sup>
genetic typing of semen	



**Table II. ITEMS TO BE COLLECTED IN STANDARD RAPE KIT**

- |                                 |   |
|---------------------------------|---|
| 1. Outer clothing               | 6. Perianal swab                            |
| 2. Drainage garment (underware) | 7. Vaginal swab                             |
| 3. Pubic combing                | 8. Vaginal washing                          |
| 4. Plucked or pulled pubic hair | 9. Oral or anal swab (according to history) |
| 5. Pulled head hair             | 10. Saliva sample                           |
|                                 | 11. Blood sample                            |

### Psychological Aspects

In addition to the medical care of the rape victim, family physicians need to be aware of the psychological aspects of rape. A two-phase Rape Trauma Syndrome has been described. Acutely, in Phase I, there is disorganization, shock, and disbelief regarding the preceding event. Some victims express feelings of anger, fear, and anxiety, often crying during the interview; others may remain calm and composed, with little outward display of emotion.<sup>14</sup> Phase I can last from six weeks to a few months. In the reorganization phase, Phase II, coping mechanisms develop over a period of a few months to a year, or longer.<sup>11</sup> The physician should discuss briefly with the patient common psychological sequelae to rape and make referral for more extensive counseling. This can be through a Rape Crisis Center, hospital social worker, or mental health facility. Sexual assault centers in Mississippi are listed in Table III. These centers offer short term crisis intervention counseling, long term individual and group therapy for survivors and families, transportation services, liaison communications with law enforcement and criminal justice personnel, support during a trial, and general information.

### CONCLUSION

With the increasing incidence of rape, the medical and social implications for the victims, and the push toward prosecution of offenders, it behooves physicians to educate themselves on the appropriate assessment of rape victims. The care a physician renders initially influences a patient's recovery from rape.<sup>9</sup>

2500 North State Street  
Jackson, Mississippi 39216-4505

### REFERENCES

**Table III. SEXUAL ASSAULT CENTERS IN MISSISSIPPI**

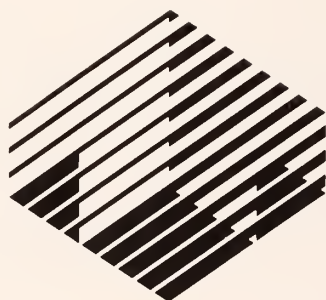
Facility	Crisis Number
Jackson Rape Crisis Center PO Box 2248 Jackson, MS 39205	982-RAPE
Hattiesburg Sexual Assault Crisis Center PO Box 10016 Southern Station Hattiesburg, MS 39406	264-7777
Safe Haven Rape Crisis Center PO Box 9133 Columbus, MS 39705	328-0200
Warren County Rape Crisis Center PO Box 1554 Vicksburg, MS 39180	636-4613
Gulf Coast Woman's Center PO Box 333 Biloxi, MS 39533	435-1968
S.A.F.E., Inc. Sexual Assault Center PO Box 985 Tupelo, MS 38801	941-CARE

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# Disposal of Medical/Infectious Waste: Its Present Status in Mississippi

JIM G. HENDRICK, MD  
Jackson, Mississippi

### GOVERNMENT REGULATIONS

The new EPA Regulations, which were expected in 1990 and have not yet been issued, will force many hospitals to make changes in infectious waste disposal.

The Mississippi Legislature in 1991 passed some significant laws pertaining to hazardous and municipal solid waste. No legislation had been recommended concerning infectious waste.

### MEDICAL ASPECTS OF WASTE DISPOSAL

The Mississippi Chapter of the Academy of Pediatrics and the MSMA passed resolutions stating our opinion of medical dangers in waste disposal thus fulfilling a need for citizens seeking reliable information when facing the establishment of a waste disposal facility in their communities.

§ See the copy of the MSMA Resolution at the close of this article.

### OPTIONS NOW AVAILABLE

No longer is incineration of medical/infectious waste the only option. Incineration may be one of the best ways for disposal of body parts and surgical specimens; but the incineration of all of the infectious waste is expensive and creates some dangerous compounds, especially from the high content of plastics.

#### I. The ABB Sanitec Microwave Disinfection System

The Sanitec Microwave process is approved in six states and there are units in use in North Carolina, Connecticut and California. Eleven units have been ordered. Delivery time is approximately six weeks.

The units are of two sizes: the smaller has a capacity of 220 lbs/hour and costs \$450,000 while the larger unit processes 550 lbs/hour and costs \$550,000. The units are small and can be placed on a flat-bed truck.

Infectious waste is taken from the hospital in large

plastic containers and fed into a chute where the waste is moistened, shredded, made unrecognizable, and the volume reduced 80%. By means of a large screw-like device the waste passes the microwave units for sterilization and then proceeds directly to a transport truck for deposit in a landfill.

In October 1990 I visited Forsyth Memorial Hospital in Winston-Salem where the chief engineer, Mr. Harry Hauser, discussed in detail their Sanitec unit.

Forsyth is a 900-bed hospital with a complex of two nursing homes, one surgical center, physician's offices, and a medical plaza with OPD rehabilitation.

Prior to 1988, Forsyth Memorial Hospital found their incinerator did not meet the state of North Carolina's specifications. The hospital obtained a permit for building a new incinerator with the estimated cost of \$3,000,000.

Mr. Hauser read an article about the Sanitec Microwave unit. He visited Germany to investigate. The result was the purchase of a unit which was delivered within a few months and installed on the hospital grounds in one week. The unit was tested for two months and then received the approval of North Carolina State Department of Environment, Resources, and Solid Waste Management.

Forsyth generates about 3,000,000 lbs of total waste yearly and 1,000,000 lbs are treated as infectious waste (Mr. Hauser, "more than is necessary to include").

1. Operating room waste
2. Emergency room waste
3. Labor and delivery room waste
4. Isolation waste
5. Intensive care waste

Cultures and stocks are autoclaved in the lab and then shredded. Pathological waste (mainly placentas and surgical specimens) are picked up by a waste management company at a cost of about \$20 per week.



Body parts are transported to a sister hospital for incineration.

The cost of the operation (not including the cost of the investment money) is \$0.06 per pound - \$0.02 to operate plus \$0.04 for maintenance. (The remaining non-infectious waste disposal cost is \$0.005 per pound now and will advance to \$0.015 per pound by 1993-1994.)

Prior to the use of the ABB Sanitec unit the cost via BFI was \$260,000 per year. During the last year with Sanitec the cost was \$60,000, a saving of \$200,000.

The U.S. Sanitec factory is in New Jersey. For further information contact Ms. Ilene Mellardi, Telephone (201) 812-8300.

## **II. Stericycle, Inc. Infectious Medical Waste Processing and Recycling**

Although the Stericycle process has been approved in 16 states, only one plant is functioning now, this in West Memphis, AR. (The plant was visited August 5, 1991). This facility treats waste from 22 Chicago hospitals (including Rush and Michael Reese) and several hospitals in the Memphis area including the University Hospital, Jackson, Mississippi.

Stericycle uses an "Electro-Thermal Deactivation Process", which subjects the waste to radio waves causing heat for sterilization. Waste is shredded to an unrecognizable state, the plastics separated from the remainder ("sharps" are included) and the two are sterilized separately. Records are kept on the amount, the source, and the treatment temperatures. Plastics are recycled and the soft waste compressed into pellets for landfill or possibly for fuel.

The capacity of the plant is 3000 lbs per hour. The cost is \$.20-.40/lb which includes collection and transportation cost.

For further information call James H. Fehling, Business Development, at the Rolling Meadows office (708) 398-3100 or Edward J. Ginnan, General Manager at the West Memphis plant, (501) 732-2362.

## **III. Plasma Energy Applied Technology**

The use of thermal plasma energy or plasma arc pyrolysis is not a new process being used in manufacturing industries but is now being applied to medical waste. It can also be used for incinerator ash, hazardous waste, toxic liquid waste, municipal solid waste and more.

The plasma energy process creates extremely high temperatures, destroys all organic gasses, liquifies metals and produces a usable gas for fuel and 0.5% solid residue permanently bound to silicon; thus no gaseous emission and no solid residue that will leak or need monitoring in a landfill.

Tests on medical waste have been done in Canada. The data has been released but not available as yet. A

company official says the report is "highly favorable."

Units can be constructed to treat 1 ton per day (TPD) or 25 TPD or 200TPD. Plants are being considered in South Carolina and California. For further information call Mr. John Matthews in Norcross, GA, (404) 416-6451.

## **RECOMMENDATIONS**

With the new EPA Regulations expected in the near future which will necessitate radical changes in medical/infectious waste disposal for most hospitals, we should coordinate our efforts to secure the safest, least expensive, and the least complex system.

Perhaps this could be accomplished by a meeting of representatives of the Mississippi Hospital Association, the Mississippi State Medical Association, the State Board of Health and each hospital in the state.

---

*Jim G. Hendrick, MD is a retired pediatrician, formerly with Children's Medical Group of Jackson. He is a member of the MSMA Environmental Protection Committee, an advisor to the legislative Environmental Protective Council and served as chairman of the Subcommittee on Medical/Infectious Waste for the Council.*

## **§ MSMA 123rd ANNUAL SESSION RESOLUTION NO. 3**

<b>Subject:</b>	Medical Aspects of Waste Disposal
<b>Introduced by:</b>	Ms Chapter, American Academy of Pediatrics
<b>Referred to:</b>	Reference Committee on Reports and Officers, Board of Trustees and Councils
<b>Adopted by:</b>	MSMA House of Delegates as MSMA Policy, May 19, 1991

**Whereas**, the growing volume of garbage is becoming an increasingly serious ecological, economic and social problem for the world, and a solution must be found in the interest of preventive health care; and

**Whereas**, Mississippi is just beginning to address these problems at city, county and state levels; and

**Whereas**, according to the Hippocratic oath, we, as medical doctors, are responsible for the well-being of the individual and also for the well-being of society as a whole; and we are therefore responsible for becoming informed on important health problems and for participating in the process of finding solutions to them; and

**Whereas**, after careful consideration the Mississippi Chapter of American Academy of Pediatrics approved the attached findings



and recommendations at their spring session on April 13, 1991; Now **Therefore Be It**

**Resolved**, that the copies of these findings and recommendations be sent to the president of the board of supervisors in counties where waste management companies seek to build incinerators or landfills; to the mayors of the largest municipalities in such counties; and to the editor(s) of the newspaper(s) in such counties.

**Resolved**, that copies of these finding and recommendations be sent to all hospital administrators in Mississippi, and be it further

**Resolved**, that the membership of the Mississippi State Medical Association be urged to monitor waste disposal in their own community and to present these finding and recommendations to appropriate persons responsible for waste management.

#### **Finding #1**

Problems are associated with present methods of waste disposal.

##### **Landfills:**

Landfill space is scarce in many areas of the country.

Landfill waste that includes all discarded products results in many dangers to the environment.

Uncovered, unlined and poorly monitored landfills slowly leach metals and toxic compounds into the soil and groundwater.

New landfills must meet new stringent Environmental Protection Agency specifications. These landfills will be much safer but will be very expensive.

##### **Incinerators:**

Incineration frees metals which are then dispersed into the air or concentrated in the residual ash, making it hazardous.

Residual ash must be placed in landfills. Its handling and transport present dangers. In landfills the metals and organic compounds are readily available to the environment.

Incineration creates many toxic organic compounds that go into the air or the ash. Only two types of compounds, dioxins and furans have been studied, and these only partially. Cumulative and long-range effects in humans are unknown.

#### **Finding #2**

The disposal of garbage (also called municipal solid waste) poses risks to public health.

All contaminants in the air eventually settle to the earth and pass into the soil, vegetation or groundwater. The Environmental Protection Agency states that all landfills will eventually leak into the soil and/or the groundwater. Through food chains or drinking water, humans will be affected.

Dioxins and furans produced by incineration are poisonous. They may increase the risk of cancer. They are suspected of suppressing the immune system. Dioxins and furans are stored in the body and appear in high concentrations in breast milk. Long-range effects cannot be predicted with present knowledge.

More than a dozen heavy metals are present in waste, usually bound with other materials. When waste is incinerated, these metals are freed, becoming more readily available to the environment.

The effects on humans beings of lead, cadmium and mercury have been widely studied.

Lead is toxic to the nervous system; it can retard brain development before birth and adversely affect mental functions in children.

Cadmium can cause lung and kidney damage.

Mercury becomes a vapor when incinerated and cannot be trapped, thus it is dispersed into the air. Mercury is toxic to the nervous system. Mercury from incinerators and electricity-generating plants in the Tampa area have rendered fish inedible and have been found in lethal amounts in some dead animals.

Contaminated air from incinerators and industrial plants aggravate asthma and other respiratory diseases.

#### **Finding #3**

Pollution control standards are inadequate to protect the public health.

Standards are based on "best available control technology," but compliance with today's standards does not guarantee safety in years to come.

#### **Finding #4**

New methods are being introduced to treat infectious wastes. One of the most promising is a microwave technique which sterilizes wastes, reduces its volume by 80%, and renders the residue unrecognizable. (The 800-bed Forsythe Memorial Hospital in Winston-Salem, North Carolina is using this technique at a cost that is only 20% of incineration costs.)

### **RECOMMENDATIONS**

#### **Recommendation #1:**

Public decisions about garbage disposal should minimize health risks. Economic considerations alone are inadequate to guide us to the correct decisions. They should play a secondary role.

After we reduce waste and recycle materials, a certain amount of garbage will remain. There is no single solution for handling those residues. Specific management methods will depend upon local conditions and the composition of the waste stream, but public health considerations must always be paramount.

#### **Recommendation #2:**

We must create less waste and make it less toxic.

We must develop rules and regulations which minimize waste generation (e.g., in the packaging industry) and which minimize production of waste that is toxic (e.g., in manufacturing processes).

Incinerators which generate electricity or steam as a by-product of waste incineration create a demand for a large volume of waste. These facilities encourage the creation of waste (and the consequent health problems associated with its disposal), instead of reduction of waste.

#### **Recommendation #3:**

We all must recycle reusable materials (e.g., glass, metals, paper, plastics) and separate our compostable trash.

In hospitals and in private practice we as doctors need to use fewer "throw-away" products, except in cases where hygiene and safety require their use.

#### **Recommendation #4:**

Counties and municipalities should institute source reduction policies, recycling/reuse programs, composting efforts and stringent operating procedures for landfills and should reverse policies that favor waste incineration.

For ecological and medical reasons, incineration should be the last option when other waste management techniques prove inadequate.

#### **Recommendation #5:**

Hospitals should consider disposing of infectious wastes by means other than incinerators. New microwave technology should be investigated.

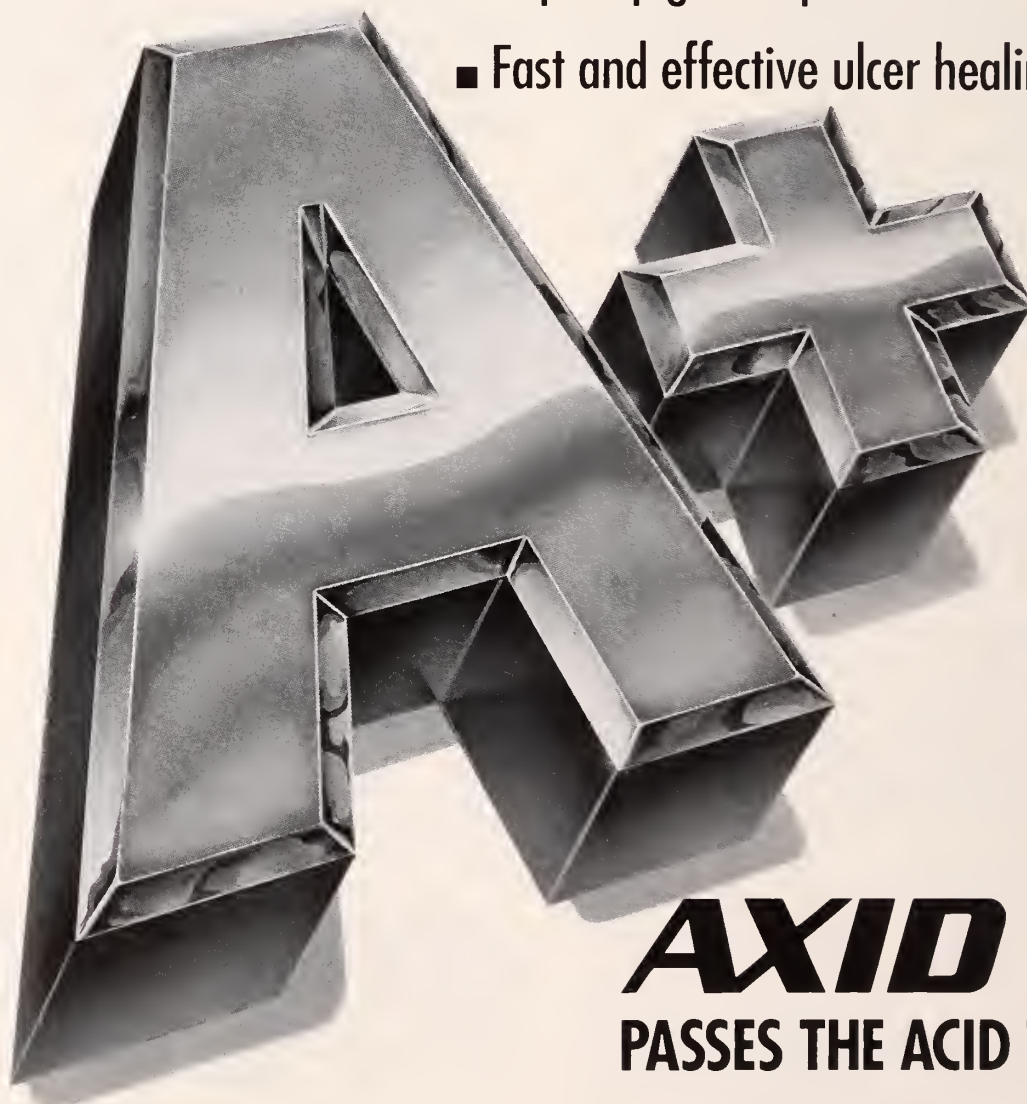


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**Indications and Usage:** 1. *Active duodenal ulcer*—for up to 8 weeks of treatment. Most patients heal within 4 weeks.

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**Contraindications:** Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H<sub>2</sub>-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H<sub>2</sub>-receptor antagonists.

**Precautions:** *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

**Laboratory Tests**—False-positive tests for urobilinogen with Multistix® may occur during therapy.

**Drug Interactions**—No interactions have been observed with theophylline, chloridazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

**Carcinogenesis, Mutagenesis, Impairment of Fertility**—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric cryptic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

**Pregnancy—Teratogenic Effects—Pregnancy Category C**—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Bearded rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers**—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

**Pediatric Use**—Safety and effectiveness in children have not been established.

**Use in Elderly Patients**—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,500 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

**Hepatic**—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

**Cardiovascular**—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

**CNS**—Rare cases of reversible mental confusion have been reported.

**Endocrine**—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

**Hematologic**—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H<sub>2</sub>-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

**Integumentary**—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

**Hypersensitivity**—As with other H<sub>2</sub>-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

**Other**—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

**Overdosage:** Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

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## The President's Page

JAMES C. WAITES, MD

### A Taste of My Own Medicine

(With apology to Edward E. Rosenbaum, MD)

One of the best movies of the summer was "The Doctor" starring William Hurt. Perhaps many of you have seen the movie. It has received favorable reviews all over the country and been referred to in several articles in our state papers. Even Erma Bombeck gave it her stamp of approval. When I first heard of the movie, and was told a little of the background, it was suggested that perhaps I should see it and then write a President's Page on the subject presented. I listened and wondered if those of us in Mississippi needed to be reminded of the patient's feelings of anxiety when he/she is sick. I was under the impression (and still am) that the vast majority of us do not fit the mold of Dr. Jack (the movie MD). However, since I recently experienced seeing the movie, reading the book and being a patient myself, I now feel qualified to comment.

The story (true by the way) revolves around a physician who is successful, respected, arrogant, in-charge, and insensitive who develops a malignancy himself. You have already guessed the rest of the story. He begins to experience the role of patient, and not-to-well I might add. The setting is a large hospital with a teaching service of residents and interns. The evolution from an "I know it all, do what I say" physician to one of sensitivity is presented well. I have been told that in many locations, when Dr. Jack (the movie MD) has the interns assume the role of patients, the audience applauded. This led me to believe we should be reminded about the feeling of anxiety associated with illness, the apprehension when you are the one on whom the tests and procedures are being done, and the IV's started. The feeling of "I am not in charge here".

First, hospital gowns are by far the most demeaning attire in the world. While I did not really care who was in the room or what was happening at the time, I felt completely exposed by the gowns, even when I was under a sheet. The nurses were great. They apologized for having to check the catheter and groin, and that was OK, but those gowns strip all the dignity from you and leave you embarrassed and vulnerable.

*(Continued on page 415)*



## Eyes on Mississippi .... Physicians

Once upon a time I was on the Cancer Committee of the American Academy of Family Physicians. We were young, aggressive and no task was too great for us to tackle. We, along with others including the American Cancer Society, persuaded the powers that were, that there was great danger in cigarette smoking and ultimately were successful in getting the *Dangerous to your Health* notation put on cigarette packages, and the public more aware of the dangers of smoking. Dr. Rod Jenkins and I had some near "falling-outs" with each other when the Academy and the MSMA House of Delegates banned cigarette smoking from their official meetings. Now there is almost universal concern, with limitation of smoking in restaurants, on airplanes, in public businesses, and just about everywhere. There has been a dramatic and impressive reduction of cigarette smoking among physicians. We have shown our patients and the public that we can be good examples for them to follow, and that is the way it should be.

It is the determination of a group and not the size of it that makes a difference in changing public opinion. That same little Cancer Committee was one of the first to go nationwide with training programs for physicians in Self-Breast examination as an effective adjunct to cancer screening.

The reason for all these personal details is simply to say that I think that it is time for us as a group to try to do something about one of our problems .... Alcohol. We have not been very good examples for

our patients nor the public as evidenced by the fact that physicians have one of the highest abuse records of all groups. We are faced with the problems of alcohol and other substance abuse often enough to where it would seem that we would do better .... but we don't.

Lately, I have noticed in our MSMA meetings and other medical meetings that the younger physicians do not seem to partake as much as we older ones and indeed many drink no alcohol at all. There was mention after our recent component society meeting that the alcohol for the meeting cost about as much as the food. This seems a bit ridiculous to me.

I think that we physicians could once again lead the way, not only for our patients, but also for other physician groups. At our medical meetings, MSMA and others that we participate in, let us speak up and insist on a change. We can: (1) Serve only non-alcoholic beverages. (2) If we must serve something alcoholic then serve only wine. (3) Limit the cocktail period to 30 minutes instead of the present one hour or more. Any one of the above would be a start in the right direction toward a more drug (alcohol) free environment and once again we could begin to be better examples for our patients. The present system of "Free-choice" has not served us well and now is the time to begin changing it.

Thank God I am a physician.

Joseph E. Johnston, MD  
Associate Editor

The editorial opinions expressed in this Journal are those of the indicated author. Editorial opinions are not expressions of the views, or official policies of The Mississippi State Medical Association. We encourage the membership to submit letters for publication regarding any opinion expressed or information contained in the Journal.



## Guest Editorial

Having begun practice fifty-three years ago, I believe I have seen some of the best and the worst of both the early era and the present.

Some of the good in 1938: doctors were "all knowing", so often doctors were almost as close as the patient's minister; lawyers belonged to an honorable profession and it was unheard of to sue a physician; there were no insurance or other third party forms to fill out. The necessity for liability insurance was unthinkable, justice was quick and fair and repeat offenders were rare, the police force was minimal and officers were respected by all, every one who came to the doctor was seen regardless of his ability to pay and no financial disclosure was required.

Some of the "not so good": you were the patient's doctor and there was never anyone else on call and you were on call 24 hours a day, 7 days a week; you were credited with far more knowledge that you had; your drug armamentarium was pitifully lacking and collections were probably 50%; if you didn't respond when called you were rarely given a second opportunity; it was truly a "buyer's market".

Today collections are better, emergency rooms are open 24 hours a day, most physicians are in groups and only on call a part of the time. The knowledge and expertise today is astounding. Doctors have a much easier life and for the most part are more affluent.

More of the "not so good". Too often doctors make little effort to economize. Not too many years ago, for example, urologist did IVPs and retrograde pyelograms as office procedures. This would be unthinkable today. Too often doctors charge far more than medicare and other insurance and hope to collect the difference from the patient. Often the allowed fee is just and reasonable. The public image of the medical profession is far below what it was a few years ago. The escalating cost of medical care begins first with the dilemma our feds have created but doctors, hospitals, and the legal profession have contributed their part. If we are obligated to give total health care to all the people we had better begin with the working uninsured who probably pay a disproportionate share of taxes. Shouldn't we lead the way?

**W. Moncure Dabney, MD**  
Editor Emeritus  
Journal MSMA

## Letters

### To the Editors *Journal MSMA*:

I am surprised at the content of the editorial authored by Dr. Joe Johnston in the August issue of the *Journal*. Although he makes many points that may be generally accepted by the population of this state and by members of this organization, this journal should be able to maintain a professional approach to the issue of AIDS and homosexuality. How can a medical journal suggest that a tragic disease such as AIDS which affects not only homosexuals, but also infants, children, and nonhomosexual adults, is an answer to any problem? There has been a long history of implying that certain illnesses may be the "wrath of God"; however, a compassionate and hopefully scientific clinician should have the professional demeanor and compassion to see the tragedy this disease carries for all of humankind rather than imply that those who may contract a nearly uniformly fatal disease "deserve" it.

While the classical family unit is not as prevalent as in previous generations, there is a growing volume of literature showing that the working mother in the context of either a two parent or single parent family does not in and of itself adversely affect successful child rearing.

Dr. Johnston presents some legitimate suggestions, such as strengthening of the family unit and development of strong role models for our youth; however, bashing a minority population does not strengthen any cause. It only shows a narrow understanding of that group and its problems, as well as problems for this society in general.

I would hope that this journal will carry a retraction and an apology for this most callous editorial.

**Chris G. Puckett, MD**  
Assistant Professor of Pediatrics  
University of Mississippi Medical Center  
Jackson, Mississippi.



## Presidents's Page

(Continued from page 412)

Another problem that all patients must feel, is the isolation of being carried down to X-ray (all X-ray departments seem to be in the basement) and then left alone in a wheel chair or on a stretcher to wait what seems to be forever. I realized then what it must be like for my patients to have to wait for me in our "reception area". You are hesitant to talk with another patient. Who wants to hear your problems when they have their own. There must be some better way.

To those in the field of medicine, these things seem so trivial, but if you are the patient, every word said or unsaid is heard. Every mannerism of the staff noted. I am reminded of one of my patients who was hospitalized in an adjacent state at a renowned hospital. He was on a ventilator after coronary bypass. His recovery was excellent until a technician came in, checked the ventilator and announced, "This thing is not working right". Of course it was working right, but can you imagine your own anxiety when you could not speak, could not move your arms to summon help and someone tells the walls that the ventilator you are dependent on is not working right and then leaves the room? We must be conscious not only of what we say, but the way and to whom it is said.

In the movie Dr. Jack finally fires his cold, busy and business like physician and turns to a sensitive, empathetic, caring one that he had previously made jokes about. I did not have such a problem. My physicians were all my friends, they all were concerned and caring and stayed with me more than they needed to, but not more than I wanted them to. It is amazing, when you are the patient, how much you want to talk with your Doctor. I know that many of us make hospital rounds once daily, but when you experience the anxiety yourself about the results of the tests, the temp spike, the cough that has developed, or the pain in the chest that you cannot explain, and then you understand the importance of a visit to reassure the patient and family that all is progressing well. Even with knowledge yourself, it is very comforting to have your physician smile, touch, reassure, and listen to you.

The movie was excellent. It projected a problem that is all too common today when medicine is more of a business than a calling. What is the message? Two months ago I shared my thoughts on "a real doctor" with you. Since then I have experienced my

own problems with health and find that I left out a very important trait. We can teach healing and procedures, we can become managers and advocates, we can and do counsel, but perhaps the most important trait that must be developed is empathy, the identification with and understanding of the patients' feelings, anxiety, frustrations, and even anger, both at his body for failing him and at his illness. I was fortunate to be surrounded by empathetic physicians, nurses, and family.

The next time you are "worn out", short tempered and frustrated, pause for a moment and think of how your patient must feel. He does not understand the illness as you do. He is dependent on you for knowledge and treatment. He needs your empathy. Are you willing to give it?

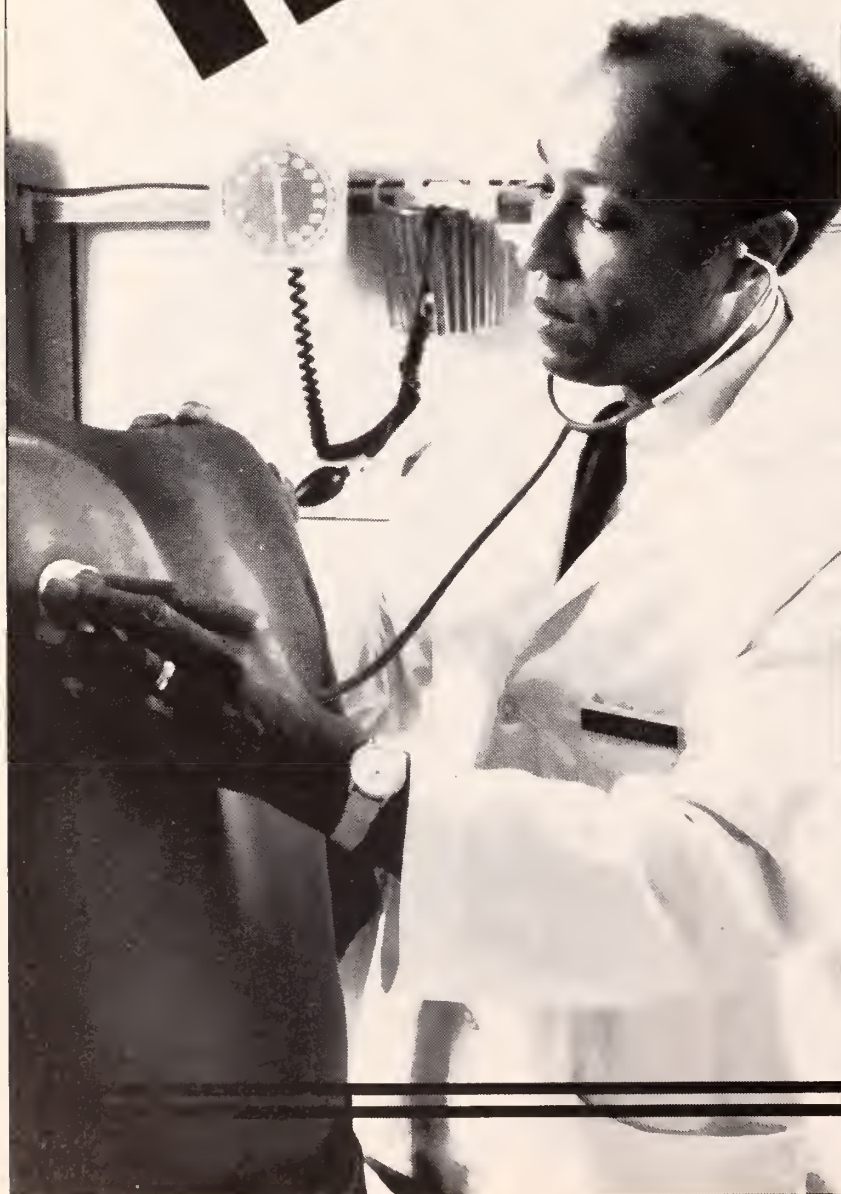
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# **“Current Opinions”** of the Council on Ethical and Judicial Affairs of the American Medical Association

## **OPINIONS ON INTERPROFESSIONAL RELATIONS**

### **Referral of Patients**

A physician may refer a patient for diagnostic or therapeutic services to another physician, limited practitioner, or any other provider of health care services permitted by law to furnish such services, whenever he believes that this may benefit the patient. As in the case of referrals to physician-specialists, referrals to limited practitioners should be based on their individual competence and ability to perform the services needed by the patient. A physician should not so refer a patient unless he is confident that the services provided on referral will be performed competently and in accordance with accepted scientific standards and legal requirements.

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### **Specialists**

A physician may choose to limit his practice to a specialty or to certain specialized services. He may also choose to provide services as a consultant to patients sent to him by other physicians, or to all patients at a hospital with which he has a contractual arrangement. He may, as an independent practitioner, choose to accept or decline patients sent to him by licensed limited practitioners, by laymen or by others.

A physician may choose those persons whom he will accept as patients and also may exercise his choice by the terms of contractual arrangements with other physicians, medical groups, hospitals or other institutions. A physician may freely choose those whom he will serve, in the absence of legal considerations to the contrary.

The obligations which a physician has to provide information to a patient or any other party are those required by customary good medical practice and law.

Although a physician may choose to limit his practice to certain diagnostic services, he may not neglect a patient under his care.

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### **Sports Medicine**

The rules and conditions governing amateur and professional contact sports such as boxing, football and hockey, and the extent to which the risks of bodily injury shall be acceptable to society, require informed decision-making in which the medical profession has an essential role.

The professional responsibility of the physician who serves in a medical capacity at an athletic contest or sporting event is to protect the health and safety of the contestants. The desire of spectators, promoters of the event or event the injured athlete that he should not be removed for the contest should not be controlling. The physician's judgement should be governed only by medical considerations.


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### **Teaching**

Physicians are free to engage in any teaching permitted by law for which they are qualified.

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# Taking A Lesson From Nature.

Did you know that wild geese have an instinctive spirit of cooperation and support for the flock? For example, by taking off together it creates an updraft that lifts the flock up. By flying in a "V" formation it breaks up the wind resistance enabling the flock to make 50% more progress. And if one bird falls due to injury or exhaustion, two others will follow it to the ground and stay with it until it is able to move on. Cooperation and support for the group.

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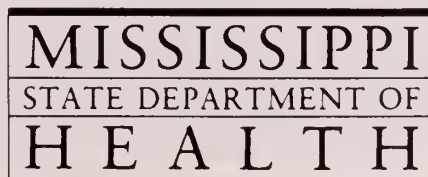
# updated Here's an easy access guide for the busy private practitioner

Throughout Mississippi public health history, we have enjoyed strong public/private partnerships. Our partnerships are more essential now than ever before.

That's why we want to make it easy for MSMA members to cut through the clutter. We want to be accessible to you so that together we can strengthen our public health system; together we can assure the conditions in which people can be healthy and provide services which comprise a caring and compassionate society.

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State Epidemiologist.....	F. E. Thompson, MD, MPH.....	960-7725
Health Services Chief .....	Will Sorey, MD .....	960-7464
District Health Officers		
Northwest - Batesville .....	James White, MD, MPH .....	563-5603
Northeast - Tupelo.....	Reeda Lyons, MD (Medical Consultant) .....	841-9015
Delta Hill - Greenwood .....	Alfio Rausa, MD.....	453-4563
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Genetic Screening .....	.....	1-800-451-3903
Health Facilities Licensure and Certification - Complaint Hotline.....	.....	1-800-227-7308
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Infectious Disease Reporting .....	.....	1-800-556-0003
Radon Information Line.....	.....	1-800-626-7739
WIC (Women, Infants, & Children) .....	.....	1-800-359-7832





# Medical Organization

## Barksdale Accepts AHA Presidency for Mississippi Affiliate



Dr. Bryan Barksdale, a cardiologist practicing in the Jackson area, was named president of the American Heart Association, Mississippi Affiliate. The Jackson native began his tenure on July 1, 1991 and will serve in this capacity until June 30, 1992.

Dr. Barksdale brings a wealth of expertise and experience to the American Heart Association. Aside from his 14-year private practice in internal medicine and four years in cardiology, he is active as a board member of several organizations, including the YMCA and the Mississippi Arthritis Foundation. He is also a member of the American Medical Association, the American College of Cardiology, and the Mississippi Medical Association.

Dr. Barksdale graduated from the University of Mississippi in 1968 and attended the University's Medi-

cal School, graduating in 1972. He completed his internship at Duke University in 1973. Dr. Barksdale returned to the University of Mississippi Medical School and completed a three-year residency in internal medicine in 1976. After completing the residency, he then served as Chief Resident in Medicine at his alma mater from 1976-77. In 1985, he received a fellowship in cardiology and became a certified cardiologist in 1987.



*Michael L. Ile, Senior Counsel, Health Law Division, AMA Chicago, at the podium, answers a question from Central Medical Society President Julian Henderson, MD, right. Mr. Ile spoke on Third-Party Negotiations and Anti-Trust Law at the October Central Medical Society quarterly meeting. Approximately 110 attended.*



*From left, MSMA President Jimmy Waites, MD of Laurel; MS Chapter, Academy of Pediatric's President F. Thomas Carey, MD of McComb and G. Boyd Shaw, MD of Jackson participated in the October 21, press announcement of "Hand in Hand" a foundation established by Blue Cross & Blue Shield to provide preventative health care coverage for Mississippi children not presently covered.*

*Drs. Carey and Shaw are currently serving as members of the Blue Cross & Blue Shield Board of Directors.*





## School Medical Advisors Meet

On October 10, eighteen volunteer MSMA school medical advisors met for an orientation session on comprehensive school health education at the MSMA building in Jackson. After a brief update on Comprehensive Health Education in Mississippi by J. Edward Hill, MD of Hollandale, each advisor received a manual and a copy of a video tape entitled, "Comprehensive Health Education - Mississippi's Unmet Opportunity". The school medical advisors were then asked to contact their local superintendent of education and set a time, before the end of the year, to present the prepared information to their school board. The manual and video tape provide each advisor the background information necessary to make a knowledgeable presentation on Comprehensive School Health Education. The objective of the presentation by the school medical advisor is to apprise the local school district of local support for teaching comprehensive health education in Mississippi's schools.

In the 1990 session, the Mississippi Legislature passed legislation giving local school districts the option for including health education in their curriculum; however, no funds were appropriated. During the 1990 fall semester, 20 Mississippi Junior and Senior High Schools completed the pilot comprehensive

health education program. This summer, 135 more teachers participated in training workshops so that they can teach the pilot curriculum in the 1991-92 school year. The freshman class of 1994 will be required to have 1/2 credit of health education for graduation.

*Advisors, shown from top left, are Drs. Buckley, Columbus; Johnston, Vicksburg; Mahaffey, Sebastopol and Benefield, Gulfport. Center left, Drs. Johnston, Vicksburg and Brandon, Starkville. Center right, Drs. Gabbert, Meadville and Lee, Forest. Bottom right, Sherry French, RN; Drs. Peoples, Jackson; Morran, Prentiss and Forbes, Jackson. Also present but not shown, Drs. Chaney, Jackson; Boggan, Decatur and Brock, McComb.*







*Thomas Carey, MD, president, MS Chapter, American Academy of Pediatrics welcomes participants to annual session.*

## MS Pediatrics Chapter Holds Annual Session

The MS Chapter of the American Academy of Pediatrics met October 10-11, at the Ramada Renaissance Hotel, Jackson. The two day program entitled, "A New Age in Pediatrics" dealt with problems unique to the care of adolescent patients. Specific topics included current societal issues pertaining to drugs, teenage sex and teen pregnancy; and new developments in Attention Deficit Disorder and Learning Disabilities.

The Claud L. Batson Memorial Lecturer was Melvin D. Levine, MD, professor of pediatric and director of

the Clinical Center for the Study of Development and Learning, University of North Carolina School of Medicine, Chapel Hill, North Carolina.

The course was coordinated by Christina Puckett, MD, assistant professor of pediatrics and L. Susan Buttross, MD, assistant professor of pediatrics and co-director of the Child Development Clinic, University of Mississippi Medical Center, Jackson. Dr. Buttross is also serving as vice-president of the MS Chapter, AAP.



*At the conclusion of his presentation on "The Success Deprived Older Adolescent", Melvin D. Levine, MD, left, the Claud L. Batson Memorial Lecturer, talks with R. Ray Lyle, MD, right, of Starkville.*

*Sixty-four people registered and attended the MS Chapter of the American Academy of Pediatrics Annual Meeting and Claud L. Batson Memorial Lecture, October 10-11 at the Ramada Renaissance Hotel, Jackson.*





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# From the University of Mississippi Medical Center

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## Faculty Appointments at UMC

Eight have been appointed to the faculty in the Schools of Medicine and Health Related Professions at the University of Mississippi Medical Center for the current academic session.

The appointments were announced by Dr. Norman C. Nelson, vice chancellor for health related affairs, following approval by the Board of Trustees of State Institutions of Higher Learning.

School of Medicine appointments include Dr. Maheshkumar P. Mehta, professor of anesthesiology; Dr. Julia A. Adams, assistant professor of psychiatry and human behavior (psychology); Dr. Victor G. Dostrow, assistant professor of neurology; Dr. Phillip T. McCandless, assistant professor of surgery (otolaryngology); and Dr. Leip H. Tjeng, instructor in orthopedic surgery.

In the Schools of Health Related Professions, appointments include Thomas C. Dandridge and Dr. S. Dean Freedle, assistant professors of interdisciplinary and cooperative education, and Samuel K. Sabine, instructor in emergency medical technology.

Dr. Mehta earned the MBBS in 1972 at the Medical College of Shivaji University in Kholapur, India. He took internships at the Civil Hospital in India and the H.H. Aga Kahn Hospital in Kenya, where he was a house officer. He took his surgical internship at St. Josephs Hospital in Denver, CO, followed by a residency in anesthesia at the University of Michigan Hospitals. Named an associate in the Department of Anesthesia at the University of Iowa College of Medicine in 1979, he was promoted to assistant professor of anesthesia in 1981, and associate professor in 1986, a position he held until coming to the Medical Center. He also was Visiting Fogarty International Fellow in the Department of Physiology and Pharmacology at the University of Strathclyde in Glasgow, Scotland from 1987-1988.

Dr. Adams earned the PhD in 1974 at the University of South Florida. She took her clinical psychology in-

ternship at the Veterans Administration Medical Center (KVAMC) in Knoxville, Iowa, where she was a staff psychologist in the Alcohol Treatment Unit for 1981-1988, and in the Neuropsychology Lab since 1988. She also had been coordinator of substance abuse programming and inservice training at KVAMC since 1988, and a psychologist with the Mater Clinic and Knoxville Area Community Hospital since 1985.

Dr. Dostrow earned the MD in 1983 at the Medical Center. He took his internship at the Albany Medical Center Hospital and affiliated hospitals, then earned a diploma in clinical neurology at the National Hospital for Nervous Diseases in London, England. He took neurology residencies at the Albany Medical Center Hospital and affiliated hospitals and the University of California at Irvine Medical Center and affiliated hospitals, where he was chief resident in neurology in 1988-1989. He has held a medical staff appointments at the University of California at Irvine Medical Center as neurology inpatient services coordinator and assistant director of the Epilepsy Clinic since 1989.

Dr. McCandless earned the PhD in 1990 at the University of Utah. He has done audiology work with Audiology Associates of Salt Lake City, Inc., Benchmark Regional Hospital, Veterans Administration Medical Center, and Wasatch Audiology Associates in Utah, and was a research associate in the Department of Anatomy at the University of Utah from 1984-1989. He had been a postdoctoral research fellow with the Kresge Hearing Research Laboratory of the South in New Orleans, LA since 1990.

Dr. Tjeng earned his medical degree in 1965 at Airlangga University in Indonesia. He took internship and residency training at Surabaya General Hospital in Indonesia, followed by an internship at Nassau Hospital in New York and residency training at Baylor College of Medicine. He was in private practice in Indonesia from 1966-1973, and has been chief of rehabilitation medicine services at the Jackson Department of Veterans Affairs Medical Center since 1977.

Dandridge, who is interim hospital director for the University Hospitals and Clinics, earned the masters in hospital administration in 1974 at the Medical College of Virginia, Virginia Commonwealth University. He has held administrative positions as assistant hospital director at the University of Virginia Hospitals in Charlottesville, VA, assistant administrator and chief operating officer at Fairview Park Hospital in Dublin, GA, and administrator at Fish Memorial Hospital in DeLand FL. He has been associate hospital director for the operations and chief operating officer at the University



Hospitals and Clinics at the Medical Center since 1988.

Dr. Freedle earned the EdD in 1971 at the University of Tennessee at Knoxville. He has worked in education since 1962 in positions including a high school teacher, principal and graduate assistant. In 1967, he was appointed assistant professor of education at Middle Tennessee State University, and promoted to associate professor in 1972. From 1974-1980, he served as dean of the School of Education at the Mississippi University for Women, and was professor of education there from 1980-1988.

Sabine earned the BS at the University of Southern Mississippi and the certificate in emergency medical technology -- paramedic at the Medical Center. He has worked as an emergency medical technician at Marion General Hospital Columbia, Jackson Fire Department and has been a paramedic with Mobile Medic in Jackson since, March, 1991.

## **AIDS Helpline**

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The Aids Helpline, a free service of the Delta Region AIDS Education and Training Center (ETC), is available to all health professionals in Louisiana, Mississippi and Arkansas, including nurses, physicians, dentists, social workers, psychologists, infection control specialists, and health administrators.

## **HYPERBARIC MEDICINE DEPARTMENT AND LOUISIANA WOUND CARE CENTER**

*Our Lady of the Lake Regional Medical Center in Baton Rouge is proud to announce the installation of our second multi-place chamber in the Hyperbaric Medicine Department and Louisiana Wound Care Center. This addition makes the facility one of the largest in the country.*



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The **1989 National Defense Authorization Act** required that the Department of Defense conduct a test to determine the effectiveness of a recruitment bonus to attract health care professionals to the Selective Reserve of the Army. The 1991 National Defense Authorization Act directed that the test continue.

The Bonus Test Program is offered to physicians in the following specialties:

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**BONUS ELIGIBILITY:** In addition to meeting all criteria for appointment as a medical corps officer in the US Army Reserve, Bonus Test applicants must be civilians and if prior service, discharged before 28 April 1989.

**BONUS AMOUNTS:** The test offers \$10,000 bonus for each year of affiliation with the Selected Reserve of the Army, up to a maximum of 3 years. Physicians must choose 1, 2, or 3 years of affiliation at time of application. Bonuses will be paid annually at the beginning of each year of agreed affiliation.

**TEST PARAMETERS:** The design of the test stipulates that bonuses be offered in certain geographic areas. To qualify, applicants must reside within those areas at the time of accession.

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# New Members

**Anwar, Mohammad A.**, Pascagoula. Born India, June 11, 1946; MD Dow Medical College, Karachi, Pakistan, 1968; elected by Singing River Medical Society.

**Blanchard, Bertha J.**, Hattiesburg. Born Natchez, MS March 18, 1957; MD University of Mississippi School of Medicine, Jackson, MS 1986; internship in medicine one year and neurology residency, University Medical Center, Jackson, MS 1986-90; elected by Central Medical Society.

**Booker, Joseph, Jr.**, Gulfport. Born Pennsylvania, February 15, 1944; MD University of California School of Medicine, San Francisco, CA 1973; interned one year and ob-gyn residency, Kaiser Hospital, Oakland, CA 1973-76; elected by Coast Counties Medical Society.

**Dostrow, Victor G.**, Jackson. Born Downey, CA, May 29, 1959; MD University of Mississippi School of Medicine, Jackson, MS 1983; interned and neurology residency, Albany Medical Center Hospital and University of CA at Irvine Medical Center, CA, 1983-89; elected by Central Medical Society.

**Guyton, Douglas C.**, Oxford. Born Jackson, MS, June 13, 1956; MD Harvard Medical School, Boston, MA, 1981; interned and general surgery residency, University of California at San Francisco, CA 1981-84; anesthesiology residency, University of Florida, Jacksonville, FL, 1986-89; elected by North Miss Medical Society.

**Kandola, J. S.**, Pascagoula. Born India, September 2, 1951; MD Ranchi University, India 1977; elected by Singing River Medical Society.

**Kennedy, E. Jeff**, Jackson. Born Tampa, FL, May 17, 1958; MD University of Mississippi School of Medicine 1984; interned one year Columbus, GA; orthopaedic residency Greenville, SC, 1985-90; elected by Central Medical Society.

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## New Members/continued

**Patel, Daksah, Jackson.** Born Baroda, India, October 18, 1948; MD Bombay, India 1971; interned and pediatric residency, Brookdale Medical Center & Maryland Hospital, New Jersey, 1971-77; neonatology fellowship, University of Cincinnati, OH, 1977-79; elected by Central Medical Society.

**Snodgrass, Philip A., Houston.** Born Warren, AK, December 31, 1938; MD University of Arkansas School of Medicine, Little Rock, AK, 1964; interned one year Mobile General Hospital, Mobile, AL; general surgery residency, University of South AL Medical Center, Mobile, AL, 1968-72; elected by Northeast Miss Medical Society.

**Ward, Joe A., Monticello.** Born Monticello, MS, July 13, 1960; MD Louisiana State University School of Medicine, New Orleans, LA 1986; interned one year, Charity Hospital and Touro Infirmary, New Orleans, LA; family medicine residency, LSU, New Orleans, LA 1987-89; elected by South Central Medical Society.

## Deaths

**Hays, Frank B., Jr, Columbus.** Born Jackson, MS, September 20, 1954; MD University of Mississippi School of Medicine, Jackson, MS 1980; interned and medicine residency, Baptist Memorial Hospital, Memphis, TN, 1980-83; died July 31, 1991, age 36.

**Thornton, Daniel R, Jr, Meridian.** Born Miami, AZ April 5, 1920; MD Hahnemann Medical College, Philadelphia, PA, 1946; interned and ob-gyn residency, Southern Baptist Hospital, New Orleans, LA.; died September 11, 1991, age 71.

**White, W Boyce, Laurel.** Born April 14, 1931; MD University of Mississippi School of Medicine, Jackson, MS, 1957; interned one year Confederate Memorial Medical Center, Shreveport, LA; died September 6, 1991, age 60.

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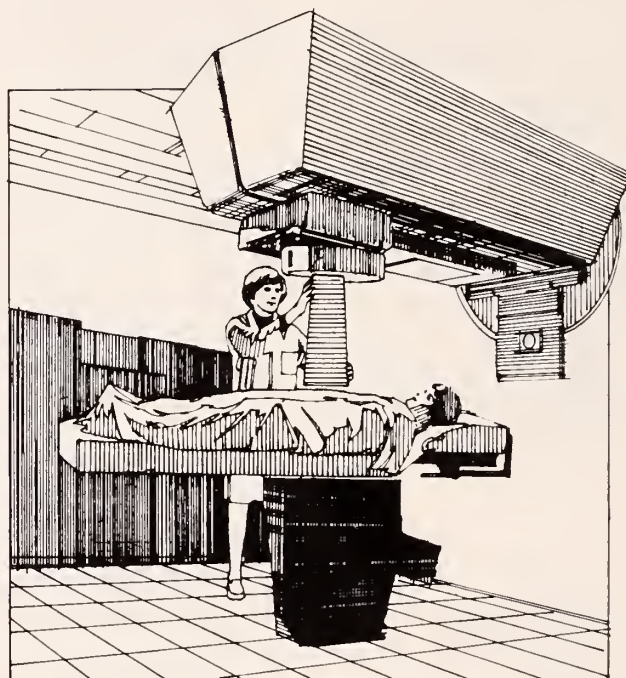


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## Personals

**Michelle D. Abram** has associated with **Geraldine B. Chaney**, Capital City Children's & Adolescent Clinic for the practice of pediatrics and adolescent medicine, 2915 North State Street, Jackson.

**Paul Allen** of Pascagoula has received a special invitation to present his work on the Modified Kelly Air Cystoscope at the 12th annual meeting of the American Society for Laser Medicine and Surgery Inc. (ASLMSI), in May of 1992.

**M. Aftab Anwar** a gastroenterologist/internal medicine specialist has joined the medical staff of Singing River Hospital, Pascagoula.

**Virgil Isaac Aultman** has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians (AAFP).

**Jim Barnett** of Brookhaven won the Democratic nomination for the Mississippi House of Representatives, District 92.

**G.D. Berryhill, Jr.**, of Clarksdale announces the relocation of his office to 860 DeSoto Extended, Clarksdale.

**L. H. Brandon** of Starkville and his son Steven of Chilhowie, Virginia took the Family Practice Board Examination in Atlanta in July. It was Dr. L. H. Brandon's fourth recertification and son Steven's initial certification. There have been few in-

stances of father and son participating in the Board examinations in this way. Both father and son satisfactorily completed the requirements for certification.

**Walter M. Burnett** announces the opening of his family medical practice at the Yazoo Family Clinic, 110 E. Broadway, Yazoo City, MS.

**Milam Cotten** of Hattiesburg recently presented a program on his 1990-91 Rotary Medical-Surgical trips to Nigeria at the regular meeting of the Hattiesburg Rotary club.

**Richard Duncan**, an orthopedic resident at UMC, won first place in the surgery resident essay competition for his paper, *Open Hand Fracture -- An Analysis of Functional Results and Complications* at the

## Physicians' Recognition Award

Seven MSMA members were named recipients of the AMA Physicians' Recognition Award in August and September 1991. This award is presented by the American Medical Association to Physicians who have voluntarily completed a specified number of continuing medical education hours. These seven individuals are presented below by medical society.

CENTRAL  
**Emily Smith Pender, MD**

EAST MISSISSIPPI  
**John Jennings Davis, MD**  
**John C. Mutziger, MD**  
**Michael B. Shrock, MD**  
**Archie Patrick Sprabery, MD**

WEST MISSISSIPPI  
**Chester W. Masterson, MD**  
**Joe Monroe Ross, MD**



American Association for Hand Surgery in Vancouver, British Columbia.

**Larry D. Field**, an orthopedic resident at UMC, took second place honors for a poster session, *Approaching the Proximal Phalanx for Fracture Fixation* at the American Association for Hand Surgery in Vancouver, British Columbia.

**Richard J. Field, Jr.** of The Field Memorial Community Hospital and Field Clinic, spoke to the Jacksonville Chapter of the American College of Surgeons at their annual meeting in September. He also spoke at the University of South Alabama School of Medicine in Mobile, AL, September 26 on Rural Surgery and Health Care.

**James Haltom** of Jackson, a pediatric allergist and immunologist, talked about the effects of asthma on the patient as well as the family during a seminar at Montford Jones Memorial Hospital.

**James W. Langston** has associated with The Field Clinic, P.A., Centerville, in the practice of urology.

**Richard L. Long** a family medicine physician of Picayune announces the opening of his second practice located in Poplarville, MS.

**Daniel J. Peasley** of Laurel announces the relocation of his practice of gastroenterology to 319 South 13th Avenue, Laurel.

**Roger H. Reed** announces the relocation of his office practice to Primary Care Associates, 11163 Highway

49 North, Gulfport, MS.

**Plez Tinsley, Jr.**, of Meridian was appointed the legislative contact for the American Academy of Facial Plastics and Reconstructive Surgery for the year 1991-92.

**Margaret Paxton Veller** has associated with the Tillman Medical Group, Natchez, for the practice of gynecology.

**Bill R. Waldon** has associated with **R. B. Robison** of the Saltillo Clinic, 353 Mobile Street, Saltillo, for the practice of Family Medicine.

**H. E. Wood, Jr.**, has associated with **Douglas C. Lanier, Jr.** in the practice of Nephrology in the partnership of South Mississippi Hypertension and Kidney Disease Specialists, 1110 Broad Ave., Gulfport.

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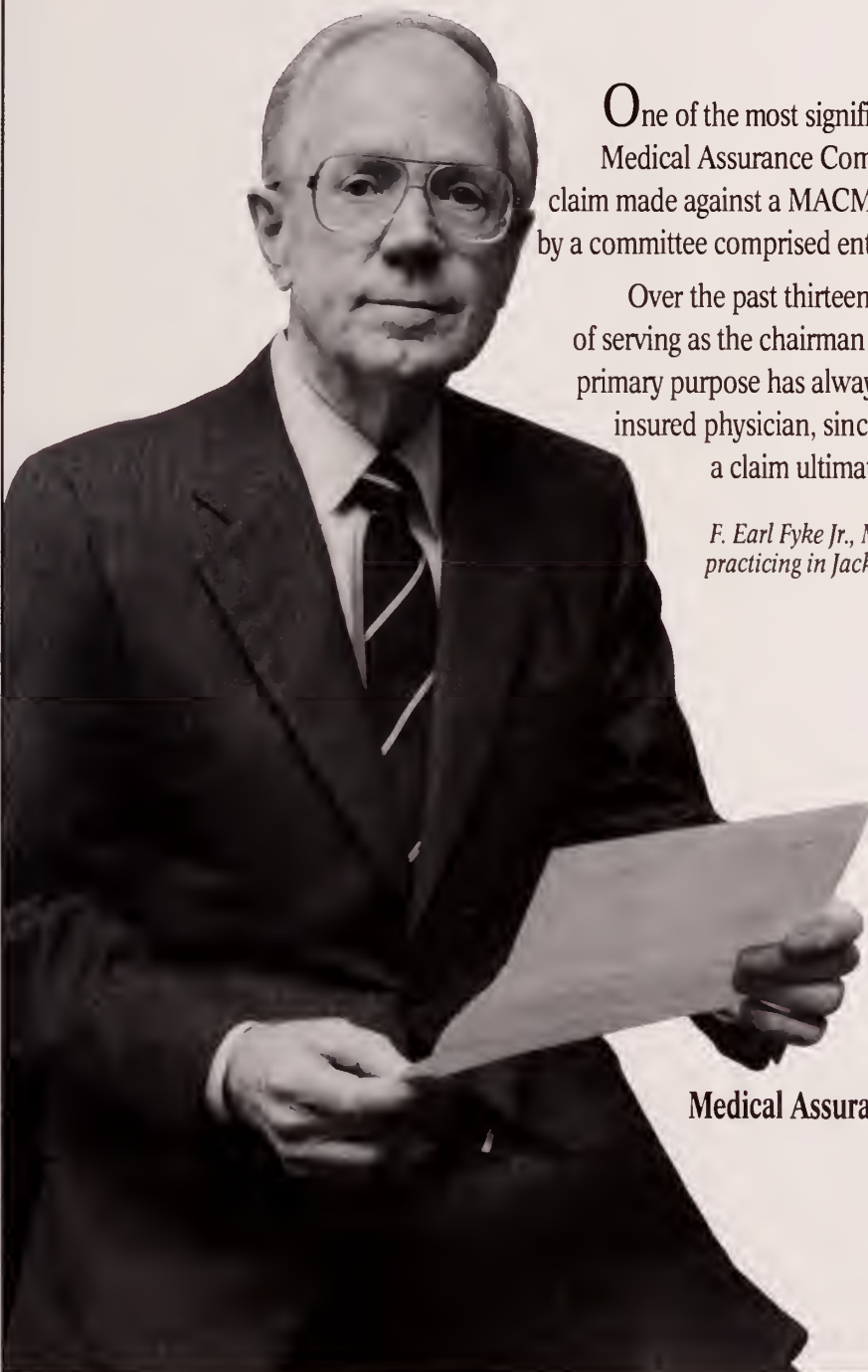
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**Precautions:** Verapamil should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Verapamil may decrease neuromuscular transmission in patients with Duchenne's muscular dystrophy and may prolong recovery from the neuromuscular blocking agent vecuronium. It may be necessary to decrease verapamil dosage in patients with attenuated neuromuscular transmission. Combined therapy with beta-adrenergic blockers and verapamil may result in additive negative effects on heart rate, atrioventricular conduction and/or cardiac contractility; there have been reports of excessive bradycardia and AV block, including complete heart block. The risks of such combined therapy may outweigh the benefits. The combination should be used only with caution and close monitoring. Decreased metoprolol and propranolol clearance may occur when either drug is administered concomitantly with verapamil. A variable effect has been seen with combined use of atenolol. Chronic verapamil treatment can increase serum digoxin levels by 50% to 75% during the first week of therapy, which can result in digitalis toxicity. In patients with hepatic cirrhosis, verapamil may reduce total body clearance and extrarenal clearance of digitoxin. The digoxin dose should be reduced when verapamil is given, and the patient carefully monitored. Verapamil will usually have an additive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after verapamil administration. Concomitant use of flecainide and verapamil may have additive effects on myocardial contractility, AV conduction, and repolarization. Combined verapamil and quinidine therapy in patients with hypertrophic cardiomyopathy should be avoided, since significant hypotension may result. Concomitant use of lithium and verapamil may result in a lowering of serum lithium levels or increased sensitivity to lithium. Patients receiving both drugs must be monitored carefully. Verapamil may increase carbamazepine concentrations during combined use. Rifampin may reduce verapamil bioavailability. Phenobarbital may increase verapamil clearance. Verapamil may increase serum levels of cyclosporin. Verapamil may inhibit the clearance and increase the plasma levels of theophylline. Concomitant use of inhalation anesthetics and calcium antagonists needs careful titration to avoid excessive cardiovascular depression. Verapamil may potentiate the activity of neuromuscular blocking agents (curare-like and depolarizing); dosage reduction may be required. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. Verapamil is excreted in breast milk; therefore, nursing should be discontinued during verapamil use.

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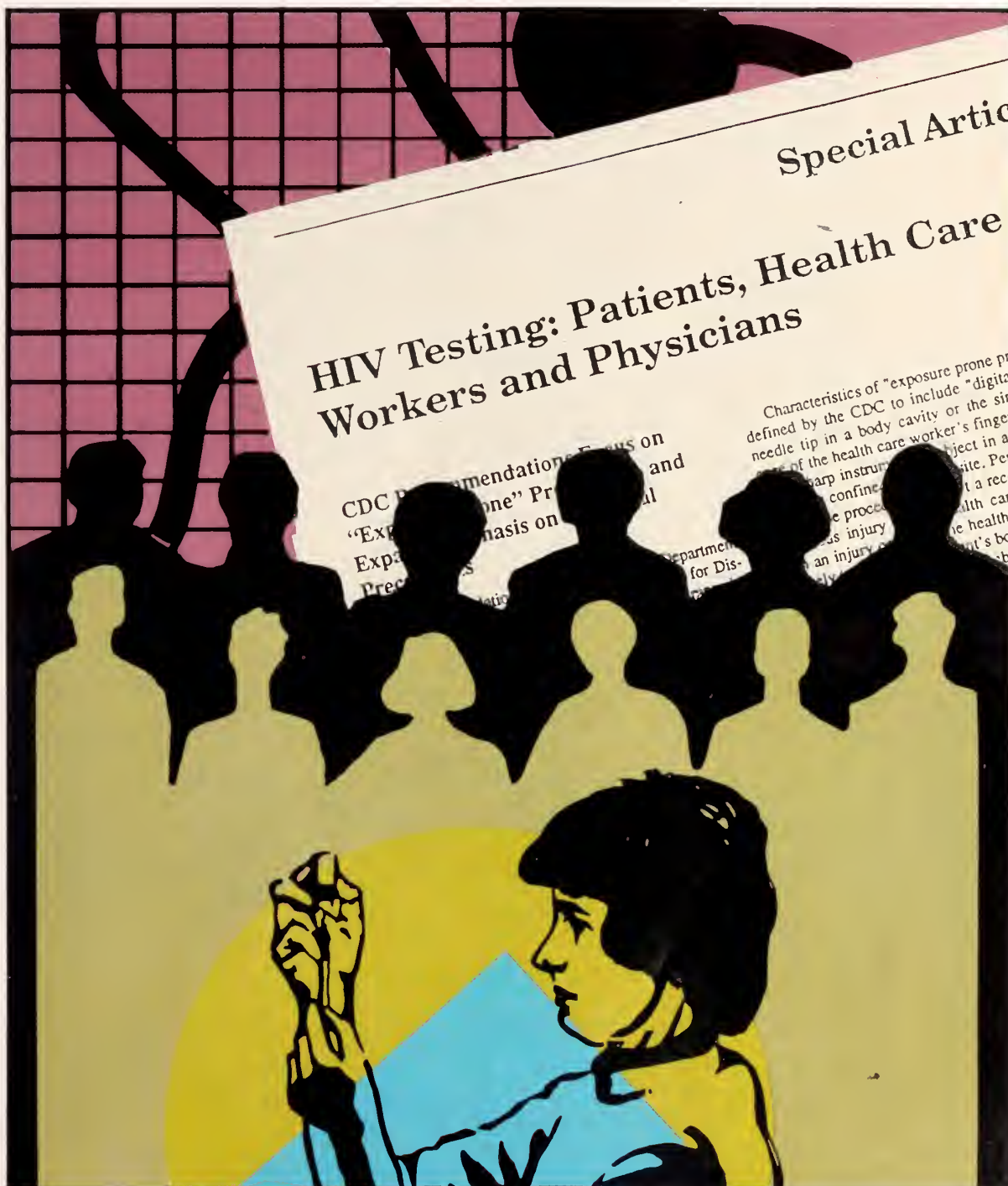


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DECEMBER

1991







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DECEMBER 1991

VOLUME XXXII

NUMBER 12

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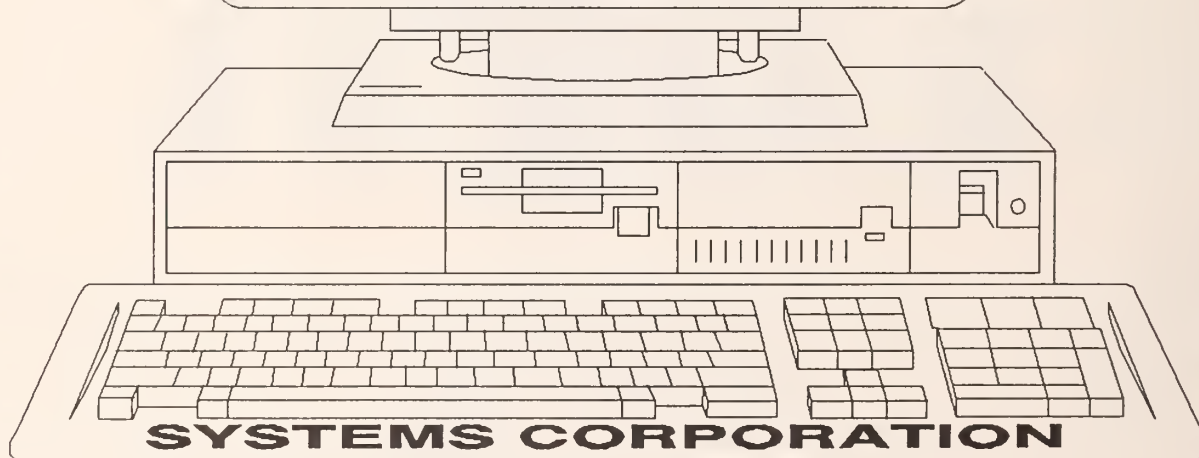
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# Newsletter

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 12

December 1991

Dear Doctor:

In the January 1991 issue of this Journal, there was an article written about the Geographic Practice Cost Indices (Gypsies) and their potential impact on all physicians. Well, the GYP-SIES are here as a gift just in time for Christmas.

In this issue of the Journal you will find reference to these and other unwanted gifts in the article on page, 449 titled **Understanding the Medicare Physician Fee Schedule and Related Practitioner Payments**.

**Do not -- Do not ignore this article and what it says. The new payment schedule goes into effect on January 1, 1992 and will have an immediate impact on your office record keeping, coding practices, and reimbursement.**

The Mississippi State Medical Association will hold a series of workshops across the state in early January. These workshops are to explain and help you understand the new required documentation.

**You, the physician, must understand** the new coding system not just your office staff. You, the physician should make plans to attend one of these workshops along with your staff. You will soon receive information concerning the time and location of these workshops. In the long run it will be to your benefit to attend.

Jimmy Waites, MD  
President, MSMA



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# Dateline

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Journal of the Mississippi State Medical Association  
Volume XXXII, Number 12

## **Court Ruling Backs Chiropractors**

Jackson, MS - The Mississippi Supreme Court ruled that chiropractors should not be ignored as authorized healers of injured workers, and the decision was hailed by chiropractors as "monumental". The case stemmed from a Mississippi Worker's Compensation Commission decision denying a claim for chiropractic services for a Hattiesburg woman who was injured when she slipped and fell at work.

The commission authorized payments to an orthopedic surgeon, an orthopedist and a general practitioner who treated Earnestine White after the February accident in which she injured her shoulder and back.

However, it refused to pay a \$2,938 bill for chiropractic care. Forrest County Circuit Court upheld the decision; White appealed.

The Supreme Court reversed the decision, calling for a determination on White's eligibility for chiropractic services by the Commission.

## **Infant AIDS - A New Killer**

Jackson, MS - In 1987, a pediatric AIDS clinic was started at the Children's Hospital of UMC. The clinic has enrolled 90 infants, born to infected women or with AIDS. Of the 90 infants in the program, 23 have AIDS. To date 8 of them (35%) have died. Of the 90 infants in the program 50% have been identified since January 1, 1990. The overwhelming majority are black, and 33% are born to mothers under 21. There are 3 families with multiple infected children. There are other families in which the woman has again become pregnant despite the knowledge of her HIV infection. For most of the mothers, their infection was through heterosexual transmission and not through drug abuse.

There are approximately 44,000 deliveries in Mississippi each year with 50% white and 50% black. Based on a blinded neonatal survey in 1990, approximately 1/1,000 deliveries are to HIV infected women. The ratio of black to white is 5:1. Geographically, HIV infection is statewide. Of the estimated 44 infants born to HIV infected mothers, 1/4 - 1/3 will develop HIV disease (AIDS): as early as 2 months, more commonly between 6-18 months, but as long as 2-6 years after birth.

## **Most Health Problems are Result of Lifestyle**

Greenwood, MS - Most of the health problems faced by Mississippians are mostly caused by their lifestyles, according to Dr. Alfio Rausa, director of the MS District III Health Office which oversees health departments in nine Delta counties.

"We have not been successful in educating the Legislature or the public about problems associated with lifestyle," Dr. Rausa said. "The top leading causes of death -- homicide, suicide -- that's a person's lifestyle."



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# Herpes Simplex Encephalitis: An Overview

E. ROSS CLIFTON, DO

**H**erpes Simplex Encephalitis (HSE) is the most common cause of non-epidemic encephalitis in the United States. Brain biopsy is the gold standard for diagnosis; however, it is not without risks. Polymerase Chain Reaction (PCR) is beginning to be used for the early diagnosis of HSE. Results are obtained in 2-3 days and the test is sensitive and specific although technically difficult to perform.

A high index of suspicion should lead the physician to begin treatment with acyclovir without delay. Clinical presentation, lumbar puncture, electroencephalography (EEG) and magnetic resonance image (MRI) scan all aid the physician in the diagnosis as well as the treatment of HSE.

Unfortunately, even with rapid diagnosis and treatment neuropsychiatric sequelae develop in more than two-thirds of patients.

### Epidemiology

HSE accounts for 10% of all cases of encephalitis in the United States. It is a rare complication of herpetic infection except for generalized herpes in infants, yet one of the most common acute sporadic viral diseases of the brain. Herpes Simplex virus - Type 1 (HSV-1) is the principal causal agent beyond the neonatal period. The age distribution is bisphasic, with peaks in patients under 20 and over 40. There is no seasonal or specific geographic distribution. Frequency of HSE is estimated to be 1:250,000 persons per year.<sup>1</sup> This disease does not appear to be

more common in immunocompromised patients, but its incidence is increasing among Human Immunodeficiency Virus patients (HIV).<sup>2</sup>

If not treated, mortality is 70%.

### Pathogenesis

HSV-1 has a predilection for the temporal and inferior frontal lobes of the brain.

There is good evidence that HSV-1 enters the central nervous system (CNS) by peripheral intra-axonal routes. Johnson and Schlitt's experiments with rabbits and mice have suggested that the olfactory tract is one route of access of HSV to the brain.<sup>3,4</sup> It is not known whether HSV 1 can exist in a latent state within the CNS or whether a latency associated transcript exists, as is found in sensory ganglia.<sup>5</sup>

An alternative hypothesis is that the virus spreads centripetally then retrograde to the anterior and middle fossae via meningeal nerves that ascend through the trigeminal trunk. Once the virus has reached the brain, subsequent replication can remain within the neurons or result in cell-to-cell or extracellular transmission.<sup>19</sup>

### Pathology

The brain shows areas of softening and of hemorrhage especially in the inferior temporal or frontal lobes. A constant feature is temporal cortex necrosis. Basal ganglia, midbrain, brain stem, cerebellum and spinal cord are relatively spared. Early in the course



of the infection neurons are affected; later the glial cells are attacked. Nuclei of infected neurons and astrocytes often contain characteristic eosinophilic masses surrounded by a halo - the Cowdry Type A inclusion body. These may be difficult to locate and can make histological diagnosis complicated in a small biopsy specimen. For this reason immunocytochemical method applied to paraffin formalin fixed tissues employing the peroxidase-antiperoxidase coupled antibody reaction is so useful, since it can detect very small amounts of viral antigens even in noninclusion bearing cells. Fluorescent antibody methods are often unreliable.

### Clinical features

Presenting features of HSVE are nonspecific and include a prodrome of headache, behavior changes, fever and vomiting that progresses rapidly to prostration, focal seizures and eventually coma.

Brain biopsy<sup>6</sup> is the most reliable way to make the diagnosis of HSVE. However, successful therapy depends on a high level of suspicion and early institution of therapy.

Cerebrospinal fluid (CSF) often shows a mononuclear pleocytosis of up to 1000 cells/mm<sup>3</sup>, normal or occasionally mildly depressed glucose, high protein content and in some cases red cells and xanthochromia; however, in 3-5% of cases, CSF is normal. In the early stages of the infection, CSF may show polymorphonuclear leucocytes but this invariably changes to a lymphocytic predominance as the infection progresses. The virus is rarely isolated from CSF except in neonatal cases and antibody measurements are not usually helpful. HSVE must be differentiated from other viral encephalitis, tuberculous and fungal meningitis, brain abscess, stroke and brain tumor.

Neurodiagnostic techniques can aid in the diagnosis and treatment of HSVE.

Albertyn<sup>7</sup> concluded that (MRI) is valuable in the early diagnosis of HSVE, in the prediction of outcome and in the evaluation of residual disabilities. This study also suggested that MRI was more sensitive in the detection of temporal lobe abnormalities than computerized tomography (CT). Gadolinium enhanced MR images were shown to be useful in imaging affected temporal lobes, trigeminal neuritis and rhombencephalitis.<sup>8</sup>

Electroencephalography is valuable in the diagnosis of HSVE. Periodic high voltage spike-wave activity emanating from the temporal regions and slow waves complexes (intervals of 2-3 seconds) are highly

suggestive of HSVE. EEG is abnormal in 80% of cases. Brick<sup>9</sup> demonstrated that in acutely ill, febrile, encephalopathic patients suspected of having encephalitis, EEG patterns had only limited correlation with biopsy results. They concluded that EEG is useful in evaluation and management of patients with encephalitis and that absence of specific wave forms or focal EEG abnormalities in the proper clinical setting should not deter consideration of HSVE or delay treatment.

Technetium brain scans show localized abnormalities in 50-60% of case. Cleater and Lewis<sup>10</sup> investigated selective uptake in the cerebral blood flow imaging agent 99 mtc - hexamethylpropyleneaime oxime oxime (HM-PAO) by HSV 1 cells. They concluded that no specific uptake of HM-PAO was observed in encephalitic rats or in HSV-1 infected vero cells.

Computerized tomography (CT) scans become abnormal after a few days but are less sensitive than technetium brain scan during the first week of HSV 1 infection. Greenbury<sup>11</sup> notes that early in the disease CT scan may be normal. CT abnormalities ultimately occur in up to 70% of patients and include localized hypodense areas, edema and mass effect.

### Polymerase Chain Reaction (PCR)

PCR is a method by which small accounts of deoxyribo-nucleic acid (DNA) can be enzymatically amplified for detection by conventional methods such as DNA hybridization - a technique used successfully for detection of papillomavirus and human immunodeficiency virus.<sup>12</sup>

Rowley and Whitley<sup>12</sup> used PCR to detect the DNA of herpes simplex virus in spinal fluid of patients with HSVE. Their preliminary results indicate that enzymatic amplification of HSV, DNA in CSF may enable accurate diagnosis of HSVE in 2-3 days. This technique may replace brain biopsy in the definitive diagnosis of HSVE. They also believe that PCR may be a guide to the effectiveness of treatment with Acyclovir.

In a recent article published in *Lancet*, Aurelius<sup>13</sup> performed a retrospective study of 43 patients with virologically unconfirmed HSVE. PCR amplification of DNA extracted from CSF allowed the detection of the viral genome in 41 samples taken from patients at the time of hospital admission. There was only one false negative result. The technique is highly specific; there were no false positive results in 87 CSF samples taken from patients with non-HSVE.<sup>13-15</sup> These results provide clear evidence that viral DNA is pres-



ent in lumbar CSF during the acute stage of infection.

A drawback to PCR is that the technique is difficult to master and assays are not generally available.<sup>13</sup>

### Treatment

Vidarabine was the first drug found to be therapeutic in clinical trials. In 1977<sup>16</sup> the National Institute of Allergy and Infectious Diseases (NIAID) Collaborative Antiviral Study group demonstrated that mortality from biopsy-proved HSVE decreased significantly 6 months after treatment with vidarabine - from 70% in placebo recipients to 44% in drug recipients. Whitley<sup>17</sup> verified a reduction in mortality to 39% and a return to normal neurobehavioral function in one third of treated patients.

More recently the NIAID Collaborative Antiviral Study group found Acyclovir to be superior to Vidarabine.<sup>18</sup> Mortality was further reduced to 28% in the Acyclovir treated patients 18 months after the state of treatment. The patient's age, level of consciousness and duration of diseases all influenced the outcome of Acyclovir. If the level of consciousness was 6 or less in the Glasgow Coma Scale, therapeutic outcome was poor. If symptoms had been present for 4 days or less when treatment with Acyclovir was begun the likelihood of 18 months survival after treatment increased from 72% to 92%.

On long term evaluation 38% of Acyclovir recipients were judged to be normal or the have mild impairment and 9% had moderate impairment. Fifty-three percent were dead or severely impaired 2 years after treatment.<sup>19</sup>

Whitley<sup>19</sup> concluded that therapy for HSVE should begin as soon as the diagnosis is suspected and even before brain biopsy since delay would increase the morbidity. The dosage of Acyclovir is 30 mg per kg per day given at 8 hour intervals for at least 10 days; however, some clinicians recommend a longer duration of therapy (14 to 21 days) in biopsy-proven HSVE.<sup>20</sup>

Relapse after treatment with Acyclovir has been estimated to be as high as 5%.<sup>21</sup> Reinstitution of treatment with higher dose of Acyclovir (15 mg per kg q 8 hours) for 21 days has been tried but the results were inconclusive.

### Sequelae of HSVE

While survival of HSVE patients treated with Acyclovir is well documented, severe cognitive impairments are common. McMillan<sup>22</sup> described a 38 year

old teacher who became violent and developed sexually disinhibited behavior following herpes encephalitis.

Gordon<sup>23</sup> performed detailed assessments of 4 patients who received Acyclovir in the early stages of biopsy-proven HSVE. All 4 showed definite residua in either clinical or formal neuropsychologic testing, most commonly dysnomia and impaired new learning of verbal and visual materials.

All 4 were unable to function at their prior level of achievement. The authors concluded that in spite of early administration of Acyclovir in HSVE, long lasting neuropsychiatric residua are likely.

Greer<sup>24</sup> illustrated language difficulties, memory deficits and propensity for physical aggression following temporal lobe damage brought about by HSVE. There has been at least one case report of good clinical response with carbamazepine in reducing EEG-detected seizure activity and in the frequency of emotional outbursts.<sup>25</sup>

In Mississippi HSVE is not coded specifically as a reportable disease. It falls in the category of encephalitis, viral not otherwise specified. From 1986 to 1990 there were 5 cases of encephalitis, viral not otherwise specified.<sup>26</sup>

Based on this it can be concluded that HSVE is under-reported in Mississippi and we should be more vigilant in notifying the Department of Health in suspected cases of HSVE. □

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# Rate Adaptive Pacers

THAD F. WAITES, MD, FACC

Permanent pacemaker therapy began in Stockholm in 1958 with the placement of a fixed rate VVI pacer by Dr. Ake Senning. Since that time the sophistication and complexity of pacers have evolved tremendously. Now rate adaptive pacers closely mimic the heart's own pacemakers; natural pacemakers that, in health, exquisitely control the body's need for physiologic heart rate variation.

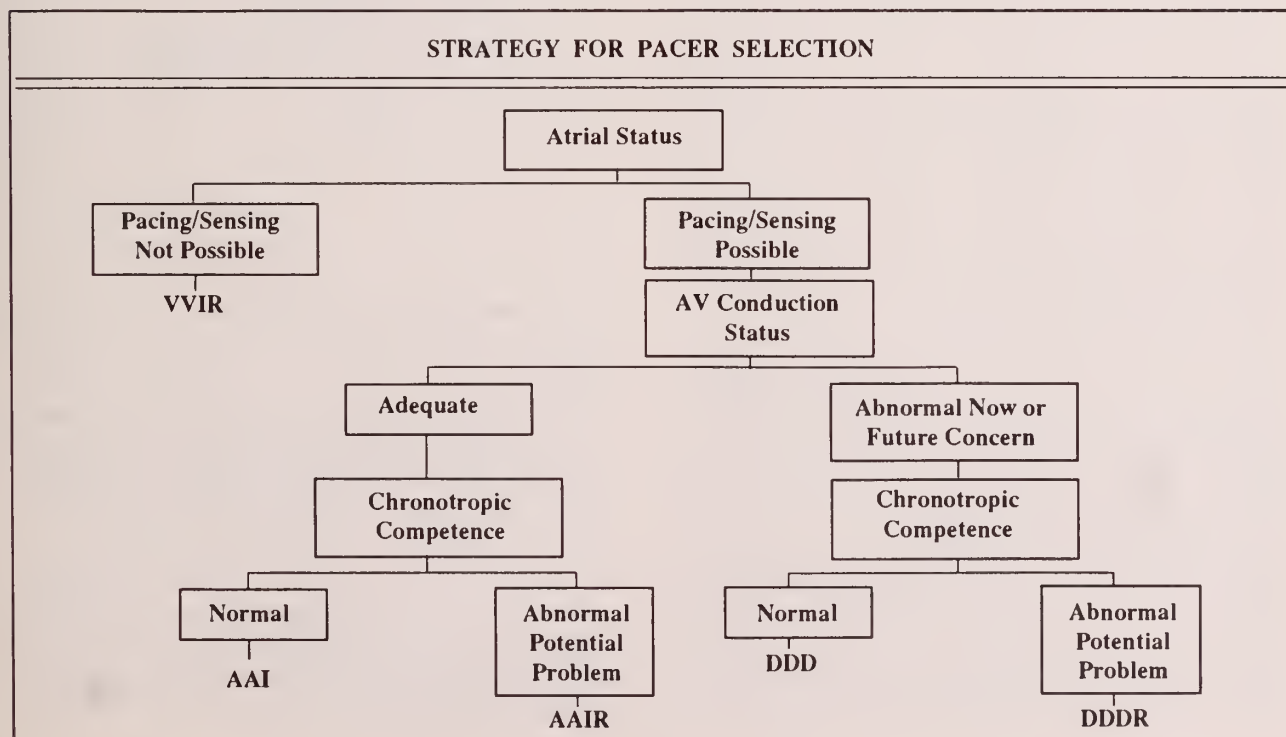
Primarily, pacers prevent symptoms associated with bradycardia. They have always done this well. However, the goal of pacer therapy in a given patient should be to emulate normal hemodynamic responses under varying physiologic conditions. Now, with the range of available modes, a pacer can be selected that not only prevents the undesirable symptoms of bradycardia but that also provides improvement of the patient's functional capacity. Rather than being limited to acting simply as rate controllers, pacers are increasingly capable of reproducing normal electrophysiologic events that yield the most efficient hemo-

dynamic and physiologic response for the patient.

Pacing modes now available range from fixed rate single chamber pacemakers to rate adaptive dual chamber systems that are responsive to any of a number of variables. This article will discuss the rate adaptive pacers and when to choose them.

## CHOICE OF THE PACER SYSTEM

Before choosing a pacing mode for the individual patient, the following should be assessed: the present pathology and the likelihood that this will worsen with time, the hemodynamic capabilities and requirements of this patient's heart, and the capability of achieving good functional capacity. It is essential to decide what the clinical situation requires, with choices ranging from simple lower heart rate control to complex rate response with AV synchrony. The schematic below shows the strategy in choosing the type of pacer:





## RATE ADAPTIVE PACING

First there was single chamber pacing and then various modes of dual chamber pacing. Until the rate adaptive pacer became available, the DDD dual chamber pacer was the most sophisticated pacer and was called "the optimal pacer". But the DDD pacer has its limitations. With atrial fibrillation or with chronotropic dysfunction of the sinus node, it fails to maintain normal physiologic response. With increasing physical work load or with emotional or physiologic stress, it cannot increase rate and thus cannot maintain cardiac output. As a result, much emphasis and development has been directed toward rate adaptive pacing.

To further discuss the limitations of non rate adaptive pacing, a few facts should be mentioned.

Sick sinus syndrome accounts for 32-48% of patients requiring permanent pacing. Also, even when heart block is the predominant abnormality, sinus node dysfunction is frequently present.<sup>1</sup> This is chronotropic incompetence and is the inability to produce a heart rate appropriate for a given level of metabolic demand. This chronotropic incompetence results in the DDD pacer functioning mainly as an atrial pacer with little physiologic response. The addition of the paced atrium does add a 15-20% boost to cardiac output but there is no adjustment to metabolic demands. Also, atrial fibrillation is commonly present in the sick sinus syndrome and, with this, atrial pacing is of no value. It is, in fact, contraindicated.

Stroke volume and heart rate are the constituents of cardiac output. By manipulation of stroke volume cardiac output is multiplied by roughly 1.5 times. With rate increase alone cardiac output can increase 3 times. At lower physical work loads, AV synchrony is the major constituent of cardiac output. As work load increases, heart rate becomes more the major contributor of cardiac output. An ideal pacing system would be able to provide both AV synchrony and an appropriate heart rate response.

Rate adaptive pacing was developed in order to advance beyond the limitations of the DDD pacer. The ideal rate adaptive pacer will respond to metabolic demand, have chronotropic competence, be capable of being used even with atrial fibrillation, and will improve exercise duration.

The single chamber rate adaptive pacer is the most frequently used. A ventricular rate adaptive pacemaker is the best solution in patients with silent atria or with intermittent atrial fibrillation, slow ventricular response, and symptomatic chronotropic incompetence.<sup>2</sup> However, ventricular rate response alone has limits in pa-

tients with sinus node dysfunction. In this group, dual chamber rate response will be needed.

The ultimate system may allow dual chamber pacing at the low heart rates and single chamber rate adaptive pacing at high rates and workloads.

Various sensor systems are used in rate adaptive pacing. These respond to the metabolic state and are being used to provide input signals for controlling rate adaptive pacing systems. Physiologic variables that are currently being used or evaluated to provide the input for these sensors are listed in Table 1. These fall into four basic categories. 1) Those that detect body motion or vibration. 2) Those that sense intrinsic changes in the flow of electrical current in the heart or other tissues. 3) Those that utilize changes in body chemistry that correlate well increased metabolic demand. 4) Those that sense temperature changes in the blood pool. Each of these indicators may vary directly or indirectly with metabolic requirements.

Table 1: SENSORS IN PACING

Activity
QT interval
Respiratory rate
Minute ventilation
Ventricular depolarization
Gradient (QRS)
Central venous temperature
Right ventricular dP/dT
Right ventricular stroke volume
Right ventricular pre-ejection period
Central venous oxygen saturation
P wave averaging
Central venous pH
Mean right atrial pressure

## RATE ADAPTIVE SYSTEMS

### Activity

The activity sensing pacers were the first to be widely available clinically. The sensor is a piezoelectric ceramic crystal located inside the pulse generator casing. This sensor is a mechanical sensor with motion deforming the crystal and transforming the energy into an electrical current. The electrical energy is processed within the electronic circuitry of the pulse generator with the low frequency physiologic signals determining pacer rate and the higher frequency signals being rejected.



The activity sensor has the advantage of being sealed and therefore having no exposure to tissue fluids. It is a long lasting sensor. The rate response for different amounts of activity can be programmed and the response time is rapid. The implant techniques are standard and require no change in procedures. Any leads can be used, including ones left from a previously placed system. Myopotential and environmental vibration interference remain drawbacks of this pacer but programming features attempt to overcome these.

While this pacer performs well in adjusting pacer rates to exercise, it does not respond to any demands other than indirectly to those induced by activity.

### Minute Ventilation

Minute ventilation is the product of respiratory rate and tidal volume and thus closely reflects the metabolic demands of exercise. Minute ventilation varies with exercise, stress, and temperature. It parallels increases in oxygen uptake with exercise.

Minute ventilation is thus an excellent variable for adjusting rate response. However, finding a suitable sensor to reflect minute ventilation has been difficult. Through various studies, transthoracic electrical impedance was found to have a linear relationship with tidal volume. This transthoracic impedance increases with inspiration, decreases with expiration, and the amplitude changes with tidal volume. Also the impedance signal shows inflections indicating direction of breath.<sup>3</sup> By processing the signals representing tidal volume and the ones representing respiratory rate, minute ventilation can be derived. Further refinement of the original system allowed the impedance to be measured between the pacemaker pocket and the tip of the ventricular electrode.

Minute ventilation systems are highly physiologic and are simple to implant and program. This pacer can respond with appropriate rate response to pathologic conditions like respiratory distress and diabetic acidosis. Standard or existing electrodes can be used. The main drawbacks involve the current drain of the sensor and the possibility of impedance changes through the years. Minor changes can be corrected by the programmed algorithm but reprogramming of the response slope may be occasionally necessary.

### Respiratory Rate

There is excellent correlation between heart rate, respiratory rate, and oxygen uptake irrespective of lung disease.<sup>4</sup> All of these variables increase with exercise and decrease after its completion. With the

goal of controlling heart rate, a sensor system has been developed to measure respiratory rate. This system consists of the pacemaker can and a separate auxiliary, or passive, lead implanted subcutaneously in the chest wall. A constant pulse is transmitted from the passive lead and the dipole length of the signal is altered by chest wall movement. An algorithm utilizes this alteration to set the pacer rate.

This sensor has several advantages. It is simple, reasonably reliable, and at least partially physiologic. Any implanted lead either in the atrium or ventricle can be used and it can therefore be used as a VVI or AAI rate adaptive pacer.

There are disadvantages. The system is limited to changes only in respiratory rate and not in tidal volume. The rate response to exertion is slow and at low workloads there may be no response at all. Complications with the auxiliary lead include non sensing, skin erosion, and dislodgement. Hyperventilation can lead to rapid and inappropriate pacing rate, even at rest. This rate adaptive system can through benefit even those with physical incapacity.

### Central Venous Temperature

The sensors to measure cardiac output by thermomodulation technique have been available for years. From experience with these, central venous blood temperature has evolved into a physiologic variable capable of being sensed for pacing rate control. The basis of the sensor is the fact that the temperature of venous blood flowing through the skeletal muscle rises with exercise. This can be detected in the right ventricle.

The sources of variation in intracardiac temperature include peripheral vasodilation, increase in metabolism with exercise, emotional anxiety, skin temperature during extreme environmental conditions, the diurnal cycle, and cyclic variation during sleep. A temperature based pacing rate algorithm should respond appropriately to each of these sources of temperature response.<sup>5</sup> Therefore the algorithm for this sensor is very complex.

The quantity of temperature rise varies with some disease states, including congestive heart failure. Also there is an early fall in temperature with exercise in the normal subject and this is more prolonged in the heart failure patient. These factors may limit the abilities of this system with congestive failure and this is one area where rate adaptation is particularly important.

There are other disadvantages. Unlike some of the other systems, the temperature sensing pacer requires



a special lead with a sensor. Rates tend to jump through various stages of rates. Also, brief activity is not reliably detected.

Although not an ideal sensor, central venous temperature does have the advantage that it is highly physiologic. And, the shortcomings can potentially be overcome with appropriate adjustment of the algorithm.

### QT Interval

The duration of the QT interval varies with cycle length; it decreases as heart rate increases and vice versa. The QT interval is independently influenced by changes in heart rate and sympathetic tone. Pacing sensors have been developed to measure the QT interval. Algorithms were then developed to use this interval to adjust a rate adaptive system. The system involves analysis of intracardiac electrograms detected by unipolar transvenous endocardial leads.

The operating principle of the QT interval pacer involves delivery of a stimulus and measurement of the resulting refractory period. This stimulus has to be delivered periodically even during normal sinus rhythm in order to determine the pacer rate. Then a window of sensing time is invoked to determine the QT interval and to establish the slope of the rate adaptive algorithm. The slope of this algorithm determines the rate of heart rate change for the pacer. The original pacers required manual adjustments of the pacer response slope but newer models use automatic slope adjustment based on calculation of stimulus to *t* interval at two different pacing rates.

The main drawback has been undersensing the *t* wave. This initially was as frequent as 10% but with hardware and software changes, this has been reduced to about 4%.<sup>6</sup>

The QT interval, or ventricular endocardial paced evoked response, is a complex sensor which is highly physiologic but nevertheless far from ideal for rate adaptive pacing. It responds well when emotions call for a faster heart rate. But it is moderately slow in response to activity. It is limited to ventricular pacing and has had cumbersome programming with the early models. However a special sensor of the lead is not required and the system can be used with most unipolar leads.

### Combined Sensors

In order to make rate adaptive pacers respond even closer to physiologic situations, two or more sensors can be combined. These can be separate systems with separate algorithms. But the more sophisticated can

have a logic interface between the two sensors so that the deficiency of one system can be overcome by the capabilities of the other. For example, slow response sensors can be combined with one with a more rapid response. As an example of this, activity could accelerate the pacer and central venous temperature could control the continuing activity rate.

Work on combination sensors is still in its infancy and is limited presently by patent laws. Many of the possible combinations are constrained by patent ownership by competing companies. In the future, complex multisensor pacing will likely be the state of the art.

### Other Rate Adaptive Sensors

There are other potential sensors available. Some of these have been tried and rejected while others await further testing or other developments to become clinically useful.

Central venous pH was the first sensor to be used clinically.<sup>7</sup> The physiologic basis for this sensor is the drop in pH when blood passes through the right atrium during exercises. Until now, there have been problems developing a reliable, biocompatible electrode and sensor. However, these problems may be overcome in the future.

The P wave averaging system is a single chamber system that depends on normal sinus node response. Ventricular pacing then responds to this. This system was introduced at the same time as reliable VDD and DDD systems and was quickly obsolete.

Right ventricular pressure changes with activity, consequently, the right ventricular *dP/dt* has been used as a variable for rate adaptive pacing. In healthy volunteers, right ventricular *dP/dt* was found to be a rapidly responding variable to changes in exercise slope, with a linear relationship to the amount of exercise.<sup>8</sup> But enthusiasm for this pacer has waned due to the variability of this sensor in different cardiac disease states.

Central venous oxygen saturation varies with physical activity and would appear to be an excellent sensor. The fall in saturation with exercise is rapid and very sensitive to the level of exercise. There are potential problems with this sensor in patients with congestive heart failure or primary lung disease. However the main limitation so far for this highly physiologic sensor has been the lack of a reliable sensor that can be incorporated into an implantable system.

Intraventricular impedance has been shown to correlate with right and left ventricular stroke volume. It can be measured within the right ventricle using a



tripolar or quadripolar pacing lead. Accurate measurement of the beat to beat variation in stroke volume has been shown with the Valsalva maneuver, with administration of amyl nitrite, and with the immediate increase following a post extra systolic beat.<sup>9</sup> This sensor works well in animal models and in healthy human volunteers but its ability with disease states, especially with right ventricular dysfunction and with atrial fibrillation, remains to be seen.

The right ventricular pre-ejection period varies with and reflects sympathetic tone. Used with other sensors, it has excellent potential as a sensor for rate adaptive pacing.

The ventricular depolarization gradient is a variable derived from the electronic integration of a paced evoked QRS complex. This gradient varies with sympathetic tone and can thus respond to exercise or to emotions. Incorporated into the system is an automatic threshold adjustment which allows low energy output without fear of clinical problems from loss of capture. This system is in the early stages of full clinical investigation.<sup>10</sup>

### Dual Chamber Rate Adaptive

DDD rate adaptive pacing is now available. Of course, even it has its limitation. But the combination of sensors will make this pacer even more responsive to physiologic needs.

The electrical current drain with these systems will be potentially great. To address this problem, systems are being developed to automatically check thresholds and to adjust current use accordingly. Also, new low threshold leads like the steroid lead may help.

### CONCLUSIONS

Since the beginning, pacemakers have been able to control symptomatic bradycardias. But more than this is required to treat the symptoms associated with incompetence of the body's natural pacemakers. First, with the dual chamber pacer and now with the development of adaptive rate pacing, full therapeutic control of these symptoms seems close at hand.

The pacer of the future is not certain but it will be capable of multiple modes of operation, automatic adjustment of responses, and sophisticated telemetry and follow-up features. It will potentially be capable of tachycardia control and may also be used as an electrophysiologic diagnostic tool.

It will be a complex electronic marvel. □

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Nominations for MSMA's 1992 Community Service Award and Communications Awards are being solicited from the association's component societies. The Community Service award is given for outstanding civic activities and consist of a plaque and a cash donation to the charitable organization designated by the recipient. This year component societies may also nominate local news reporters for the Excellence in Medical Reporting Award presented annually by the association to print, radio and TV media. Component societies are also eligible to receive a new Certificate of Merit award for programs sponsored by the society which further the positive image of the medical professions.





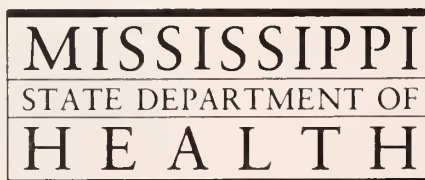
# Partners In Health Care

Mississippi physicians and the public health system. We work together because we have to; Mississippi's meager resources and enormous health care needs demand that we all focus our efforts on the same health care goals. And we also work together because that's what Mississippians do: help each other.

Whenever private physicians work with the public health team, we're all helping make life better for our own families and friends.

We can share the credit for having achieved so much with so little. But we must continue to work together and with our state's policy-makers to address identified but unmet needs.

Together, we can!





# HIV Testing: Patients, Health Care Workers and Physicians

### CDC Recommendations Focus on "Exposure Prone" Procedures, and Expand Emphasis on Universal Precautions

New recommendations issued by the U. S. Department of Health and Human Services (HHS) Centers for Disease Control (CDC), state that the risk of HIV transmission to a health care worker after a percutaneous exposure to an HIV-infected is considerably lower than the risk of HBV transmission after exposure to hepatitis B e antigen (HBeAg).

The CDC commented on its study since the early 1970s of published reports documenting 20 clusters in which a total of 300 patients were infected with HBV in association with the treatment by an HBV-infected health care worker. By contrast, investigations indicated one cluster in which an AIDS-infected dentist transmitted HIV to five of his approximate 850 patients.

In its long-awaited report, published in the *Morbidity and Mortality Weekly Report*, July 12, 1991, the CDC stated, "The risk of HIV transmission from an infected health care worker to a patient during an invasive procedure is likely to be proportionately lower than the risk of HBV transmission from an HBeAg-positive health care worker to a patient during the same procedure. As with HBV, the relative infectivity of HIV probably varies among individuals and over time for a single individual. Unlike HBV, however, there is currently no readily available laboratory test for increased HIV infectivity."

The CDC noted that "despite adherence to the principles of universal precautions, certain invasive surgical and dental procedures have been implicated in the transmission of HBV from infected health care workers to patients, and should be considered exposure prone. Reported examples include certain oral, cardi thoracic, colorectal (CDC, unpublished data), and obstetric/gynecological procedures."

Characteristics of "exposure prone procedures" were defined by the CDC to include "digital palpation of a needle tip in a body cavity or the simultaneous presence of the health care worker's fingers and a needle or other sharp instrument or object in a poorly visualized or highly confined anatomic site. Performance of exposure-prone procedures present a recognized risk of percutaneous injury to the health care worker, and -- if such an injury occurs -- the health care worker's blood is likely to contact the patient's body cavity, subcutaneous tissues, and/or mucous membranes."

The CDC stated that when infection-control procedures are adhered to, the risk of transmitting HBV from an infected health care worker is small, and the risk of transmitting HIV is even smaller. "However, the likelihood of exposure of the patient to a health care worker's blood is greater for certain procedures designated as exposure prone. To minimize the risk of HIV or HBV transmission, the following measures are recommended:

- "All health care workers should adhere to universal precautions, including the appropriate use of hand washing, protective barriers, and care in the use and disposal of needles and other sharp instruments. Health care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient care and from handling patient-care equipment and devices used in performing invasive procedures until the condition resolves. Health care workers should also comply with current guidelines for disinfection and sterilization of reusable devices used in invasive procedures."
- "Currently available data provide no basis for recommendations to restrict the practice of health care workers infected with HIV or HBV who perform invasive procedures not identified as exposure-prone, provided the infected health care workers practice recommended surgical or dental technique and comply with universal precautions and current recommendations for sterilization/disinfection."
- "Exposure-prone procedures should be identified by



medical/surgical/dental organizations and institutions at which the procedures are performed."

- "Health care workers who perform exposure-prone procedures should know their HIV antibody status. Health care workers who perform exposure-prone procedures who do not have serologic evidence of immunity to HBV from vaccination or from previous investigation should know their HBsAg status, and if that is positive, should know their HBeAg status."
- "Health care workers who are infected with HIV or HBV (and are HBeAg positive) should not perform exposure-prone procedures unless they have sought counsel from an expert review panel and been advised under what circumstances, if any, they may continue to perform these procedures. Such circumstances would include notifying the prospective patients of the health care workers seropositivity before they undergo exposure-prone invasive procedures."
- "Mandatory testing of health care workers for HIV antibody, HBsAg, or HBeAg is not recommended. The current assessment of the risk that infected health care workers will transmit HIV or HBV to patients during exposure-prone procedures does not support the diversion of resources that would be required to implement mandatory testing programs. Compliance by health care workers with recommendations can be increased through education, training, and appropriate confidentiality safeguards."

Additional needs identified by the CDC were:

1. Clearer definition of the nature, frequency, and circumstances of blood contact between patients and health care workers during invasive procedures.
2. Development and evaluation of new devices, protective barriers, and techniques that may prevent such blood contact without adversely affecting the quality of patient care.
3. More information on the potential of HIV and HBV transmission through contaminated instruments.
4. Improvements in sterilization and disinfection techniques for certain reusable equipment and devices.
5. Identification of factors that may influence the likelihood of HIV and HBV transmission after exposure to HIV- or HBV-infected blood.

## **CDC HIV Guidelines Match AMA Policy**

On July 15 the Centers For Disease Control (CDC) issued its long-awaited guidelines for HIV- and HBV-infected health care workers. Those guidelines do not vary substantially from the policies established by the

American Medical Association (AMA).

**The policies that essentially conform with AMA policy include:**

- Mandatory HIV or HBV testing for health care workers is not recommended either by the AMA or the CDC.
- Both the AMA and the CDC recommend that the health care workers exposed to HIV or HBV should determine their serostatus.
- Both the AMA and the CDC continue to emphasize the importance of routine infection control. The CDC has also recommended that medical equipment be sterilized or disinfected as part of infection control.
- The AMA and the CDC recommend restriction of HIV- and HBV-infected (and HBeAg positive) health care workers who perform certain types of invasive procedures. The AMA uses the term "invasive procedures with identifiable risk," while the CDC speaks of "invasive procedures that are exposure prone." The list of "exposure prone" or "identifiable risk" invasive procedures has yet to be created. The CDC suggests that this is an appropriate task for medical/surgical/dental organizations, and for institutions at which these procedures are performed.
- Both the AMA and the CDC recommend that infected health care workers (HIV or HBV and HBeAg positive) be guided by a local medical panel concerning exposure-prone procedures. The local panel can prohibit or allow exposure-prone procedures for a health care worker. However, if the exposure-prone procedures are permitted, prospective patients must be notified in advance of the procedure that the health care worker is infected.
- The local review panel suggested by the CDC might include a public health official, but the AMA suggestions for the panel members does not necessarily include state or local officials.
- Both the AMA and the CDC recommend efforts to retain the infected health care worker in appropriate health care employment through retraining and career counseling.
- The CDC recommends that look-back programs for the patients of health care workers be considered on a case-by-case basis. The AMA has not announced a position on look-back programs.
- Hepatitis B vaccination should be routine for health care workers who are exposed to patient blood, according to both the AMA and the CDC.

One CDC recommendation that requires clarification is that health care workers "who have exudative lesions or weeping dermatitis should refrain from all direct patient care and from handling patient-care equipment and devices used in performing invasive procedures until the condition is resolved." □



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# Understanding the Medicare Physician Fee Schedule and Related Practitioner Payments

NOVEMBER 1991

## Introduction

A new Medicare physician payment system takes effect January 1, 1992. It is the most significant change in the way Medicare pays doctors, practitioners, and suppliers since the program began. More importantly, the changes create more equity and consistency in payments to physicians and others affected by the reforms.

This brochure will provide you with a general description of how physician payment reform works. We have also answered some commonly asked questions about the new system and believe that you will find this reference brochure a useful guide. In addition, please contact your Medicare carrier with any questions you may have.

Congress enacted the reforms in 1989 to address widespread concern that the "reasonable charge" payment system led to imbalances in relative payment levels between "procedural services, such as surgery, and primary care services such as visits and consultations. The new Medicare physician fee schedule will substantially address these concerns as it is phased in over five years.

We at the Health Care Financing Administration (HCFA) have worked hard over the past two years to implement the new payment reforms. In cooperation with members and organizations in the medical community, we have developed a payment system that will bring about a greater degree of uniformity, consistency, and predictability to Medicare payments. The new fee schedule also goes a long way to correct price imbalances that currently exist between geographic areas. We will continue to work with the medical community to refine the national fee schedule.

Finally, we at Medicare appreciate the health care services that you and your colleagues provide to the more than 34 million beneficiaries of this important

health insurance program. We hope that you will sign on as a Medicare participating physician, practitioner, or supplier.

Sincerely,  
**Gail R. Wilensky, PhD**  
Administrator

## What is the new Medicare Physician Fee Schedule, and why was it enacted?

Congress enacted a three-part physician payment reform package in 1989. One reform sets a goal for the rate of increase in Medicare physician expenditures, while a second establishes limits on the amounts that physicians can charge beneficiaries. The third major element, which takes effect beginning January 1, 1992, established a physician fee schedule.

The fee schedule will be phased in over a five year period. It will replace the historical customary, prevailing, and reasonable charge system, which was criticized because it resulted in wide variations in payment levels for the same service in different geographic locations. Also, that system was criticized because it is difficult to understand and administer.

Use of a fee schedule to pay physicians is consistent with the recent trend in Medicare to pay for other services such as clinical diagnostic laboratory services and durable medical equipment on a fee schedule basis. Unlike these other fee schedules, which are based on historical charging patterns, the physician fee schedule uses a resource-based relative value system.

The fee schedule is based on research that has been underway for several years both inside and outside of government, most notably at Harvard University's



School of Public Health. It was developed with the assistance of thousands of physicians who participated in Harvard's study.

## What are the components of the basic fee schedule payment?

### Attributes of the Medicare fee schedule

Essentially, the Medicare fee schedule amounts will be based on the relative resources used to render a service -- not the charges physicians have typically billed for the service. Variations in practice costs between areas will be recognized through application of geographic practice cost indices (GPCIs). There will be no payment differentials for a service based on the specialty of the rendering physician. There will be annual updates to the fee schedule amounts.

### Payments under a Medicare fee schedule

Under the fee schedule, Medicare continues to pay 80% of the allowed charge. The allowed charge is the actual charge or the fee schedule amount, whichever is lower.

The fee schedule amount for a service will be the product of three numbers:

- The **relative value units** (RVUs) for the service. In almost all cases, this is established nationally for each procedure code and will not vary between carriers,
- The **geographic practice cost indices** (or GPCIs) for the locality where the service was rendered, and
- The **national conversion factor** (CF) used with the fee schedule. This is a single national number that is used by all carriers in calculating payments under the Medicare fee schedule.

## Relative Value Units

The total relative value units (RVUs) for a service will be the sum of the RVUs associated with three components of the service:

- The physician work required for the service. These units were developed by panels of physicians and researchers at Harvard University and, in some cases, refined by HCFA. The work component of the RVU was based on the time required to furnish the service, the intensity of the effort, and the technical skills required,
- Practice expenses such as office rent, salaries of office staff, and supplies, and

- Professional malpractice liability premiums.

## Geographic Practice Cost Indices

As mentioned earlier, Medicare fee schedule amounts will be adjusted to reflect the variation in practice costs from area to area. A geographic practice cost index (GPCI) has been established for every Medicare payment locality for each of the three components of a procedure's RVU (work, overhead and malpractice).

## The Five Year Transition Policy

HCFA estimates that about one-third of physicians' services will be paid on the basis of the full Medicare fee schedule in 1992; the other two-thirds will be paid on the basis of a transitional fee schedule while moving to the full fee schedule amount over the next five years. By 1996, all physicians' services will be paid under the full Medicare fee schedule.

A service will be paid at the full fee schedule amount in 1992 if the adjusted historical payment basis (AHPB) for the service is within 15% of the full fee schedule amount. (Generally, the AHPB is equal to the average Medicare allowance for the service in the locality in 1991, increased by the annual update factor for 1992. Then a 5.5% downward adjustment is applied. This reduction is a technical adjustment required to assure budget neutrality during the transition period. There is no permanent reduction in the fee schedule due to this adjustment.) This determination will be made for a service in each prevailing charge locality. Thus, a procedure might be paid at the full fee schedule in 1992 in one locality but not in another.

If the AHPB in a locality exceeds or is less than the full fee schedule amount by more than 15%, the service will move to the full fee schedule over a five year period. For 1992, if the AHPB is more than 115% of the fee schedule, 15% of the fee schedule amount is deducted from the AHPB; if the AHPB is less than 85% of the full fee schedule, 15% of the fee schedule amount is added to the AHPB. For years after 1992, the transition continues as follows:

- In 1992, 25% of the fee schedule amount is added to 75% of the 1992 payment rate
- In 1994, 33% of the fee schedule amount is added to 67% of the 1993 payment rate
- In 1995, 50% of the fee schedule amount is added to 50% of the 1994 payment rate
- In 1996, all physicians' services will be paid on the



full fee schedule

The following charts illustrate how to determine whether a service will be subject to the five year transition policy and how to determine the 1992 fee schedule amount for transitioned services.

### How to determine whether a service is subject to The 5-Year Transition Rule

If the AHPB in a locality is...	And the locality fee schedule amount is ...	The locality fee schedule amount $\pm$ 15% is ...	Is service subject to the transition rules in that locality?
\$110	\$100	\$85 to \$115	No
\$120	\$100	\$85 to \$115	Yes (see chart below)
\$ 90	\$100	\$85 to \$115	No
\$ 80	\$100	\$85 to \$115	Yes (see chart below)

### How to determine 1992 Fee Schedule Amounts for services subject to Transition Rules

If the AHPB in a locality is...	And the locality fee schedule amount is ...	15% of the locality fee schedule amount ...	And the locality AHPB adjusted by 15% of the locality schedule amount is ...
\$120	\$100	\$15	\$105 (\$120 - \$15)
\$ 80	\$100	\$15	\$ 95 (\$80 + \$15)

**NOTE:** Special transition rules apply to radiology services. For radiology, if the AHPB exceeds 109% of the fee schedule amount, rather than the 115% applicable to other services, the amount payable is the AHPB minus 9% of the fee schedule amount (rather than 15%).

### Do physician fee schedule payments apply to only physicians?

No. The fee schedule is used to pay for:

- physicians' services,
- services "incident to" physicians' services,
- outpatient physical therapy and outpatient occupational therapy services,
- diagnostic tests (other than clinical laboratory tests), and
- radiology services.

The fee schedule applies when paying for these services regardless of whether they are provided by a physician or a nonphysician (e.g., independently practicing physical therapists, independent labs).

Also, as is discussed in more detail later other types of practitioner services (e.g., physician assistant and nurse midwife services) are paid amounts related to this physician fee schedule.

**NOTE:** Clinical laboratory services are paid for on the basis of a different fee schedule and must be billed on an assigned basis.



## What other aspects of the Fee Schedule should I know about?

- There will be a uniform global surgery policy applied by all Medicare carriers.

Under that policy, the global payment for major surgery includes payment for:

- preoperative visits occurring one day prior to surgery,
- all usual intraoperative procedures,
- medical or surgical services related to complications which are performed by the surgeon and which do not require a return to the operating room, and
- visits for the 90-day period after the surgery.

The global payment for major surgery does not include:

- pre-operative consultations, and
- returns to the operating room.

The global payment for minor surgery includes payment for:

- visits performed on the day of the surgery (if the visit is not for a readily identifiable service in addition to the procedure),
- the procedure itself, and
- in the case of certain procedures, visits occurring during a post-operative period specified by HCFA.

- For **endoscopies**, no separate payment will be made for visits occurring on the same day as the procedure unless a separate, readily identifiable service was provided. There is no post-operative period for endoscopies.

- **New visits and consultation codes** will go into effect on January 1, 1992. These codes will be in the 1992 CPT manual published by the American Medical Association,

- Some services will continue to be paid for on a **by report** basis. These would include services with unusual or reduced services modifiers. "By report" means that they will be subject to individual review of consideration. Physicians must include a concise statement about how the services differ from the usual service, and an Operative Report, when using modifier 22 to indicate unusual services.

- There will be **additional payment made for certain surgical supplies** when they are used in conjunction with certain procedures performed in an office.

- In **health professional shortage areas (HPSAs)**, physicians will continue to receive an additional **10% above the amount paid under the fee schedule**.

- Payment for most drugs will be based on the lower of the national wholesale price or the estimated acquisition cost.

- The fee schedule does **not** apply to payment for physicians' **outpatient maintenance dialysis services**.

- **For radiology services:**

- the new fee schedule, unlike the old, has only one national conversion factor. (There are no longer locality conversion factors or separate conversion factors for portable x-ray services.);

- complete procedure interventional radiology codes will no longer be recognized. All claims will be paid under the supervision and interpretation code and the associated nonradiology code;

- local codes will no longer be permitted for radiation therapy; and

- in certain circumstances, additional payment will be made for non-ionic contrast agents as drugs.

- **For anesthesia services**, actual time will continue to be a factor in computing anesthesia payments. Payment will be determined by multiplying an anesthesia conversion factor (adjusted by the locality GPCI) by the sum of anesthesia base and time units.

- Under the fee schedule, any telephone calls, travel or injection services, which are covered services, are almost always bundled into the payment made for other related services and thus not separately payable. EKG interpretations are bundled in this manner if they are performed or ordered as part of a visit or consultation.

## Other than the transition, do any other adjustments apply when calculating Fee Schedule amounts?

Yes, many of the same kinds of adjustments that applied under the old system will apply under the new fee schedule. These adjustments are either required by law or were otherwise established to create appropriate payment levels. Thus, the need for them continues.

### Adjustments will be made:

- When a physician does not file a participation agreement with the Medicare program. (A separate pamphlet on the participation program and its requirement that participants accept assignment, i.e., accept the Medicare allowance as payment in full, is available from your carrier.)

- For these physicians, the fee schedule amount is 95% of what it would have otherwise been. This differential does not apply to nonparticipating suppliers, unless they are billing for a physician's professional



service.

- When a physician acts as an assistant at surgery.
- For these physicians, the fee schedule amount is 16% of the fee schedule amount used to pay the primary surgeon. These services should be reported using the CPT modifiers 80 and 82.
- When certain services are performed in a hospital outpatient department.
- When services which are usually provided in a physician's office are performed in a hospital outpatient department, the physician's fee schedule amount reflects a 50% reduction in the practice expense portion of the relative value units.
- When a provider furnishes less than a global surgical package.
- The provider's fee schedule amount is based on the portion of the global package which he or she actually renders. Physicians should use modifier 54 when providing surgical care only and modifier 55 when providing postoperative management only.
- When multiple surgical procedures are performed.
- When this occurs, the fee schedule amount for the second procedure is 50% of what it would have otherwise been and 25% for the third and subsequent procedures. Special rules apply to multiple endoscopic and multiple dermatological surgical procedures.
- When a new physician (or new non-physician practitioner) is furnishing services.
- Beginning January, 1992, the fee schedule amounts for new physicians and other practitioners is as follows:

Year(s) in Practice	Percentage of Fee Schedule Amount
First	80%
Second	85%
Third	90%
Fourth	95%
Fifth	100%

The adjustments apply to services of each physician and practitioner, including those who are members of a group. They do not apply in rural health professional shortage areas. They also do not apply to the payment of physician primary care services.

### What beneficiary protections apply?

- Balance billing limits, known as limiting charges, became effective January 1, 1991 for unassigned claims

filed by nonparticipating physicians. These limits are simpler and generally more favorable to beneficiaries than the maximum allowable actual charges (MAACs) they replaced. In most cases, a nonparticipating physician or a supplier or other entity billing on behalf of the physician cannot charge more than the following amounts on unassigned claims:

- during 1992, 120% of the nonparticipating physician fee schedule amount; and
- during 1993 and subsequent years, 115% of the nonparticipating physician fee schedule amount.
- Remember that the nonparticipating fee schedule amount is the resulting amount after all "adjustments" have been made, e.g., new physician, assistant at surgery, and multiple procedures. Therefore, the limiting charge can be no more than 120% (in 1992) or 115% (in 1993 and beyond) of the "adjusted" fee schedule amount.
- Nonparticipating physicians or suppliers who have questions about their limiting charges should contact their carrier.

**NOTE:** The limiting charge provisions do not apply to nonparticipating suppliers (i.e., nonphysicians) who are paid under the physicians' fee schedule, except when the bill for a physicians's service.

### So what will all this mean to your practice:

The impact of the new Medicare fee schedule on a physician's practice will vary a great deal depending on specialty, practice location, participation status, current customary/prevaling charges and, for nonparticipants, the physician's current limiting charge. Physicians will have to evaluate the data made available by their carrier to determine individual impact.

### What about Related Payment and Assignment Rules for nonphysician practitioners?

For a number of nonphysician practitioners, Medicare payment for their practitioner services is linked to Medicare's payments under the physician fee schedule. Those are the practitioner services of

- Physician assistants (PAs),
- Nurse practitioners (NPs),
- Clinical nurse specialists (CNSs),



- Certified registered nurse anesthetists (CRNAs), and
- Nurse midwives (NMs).

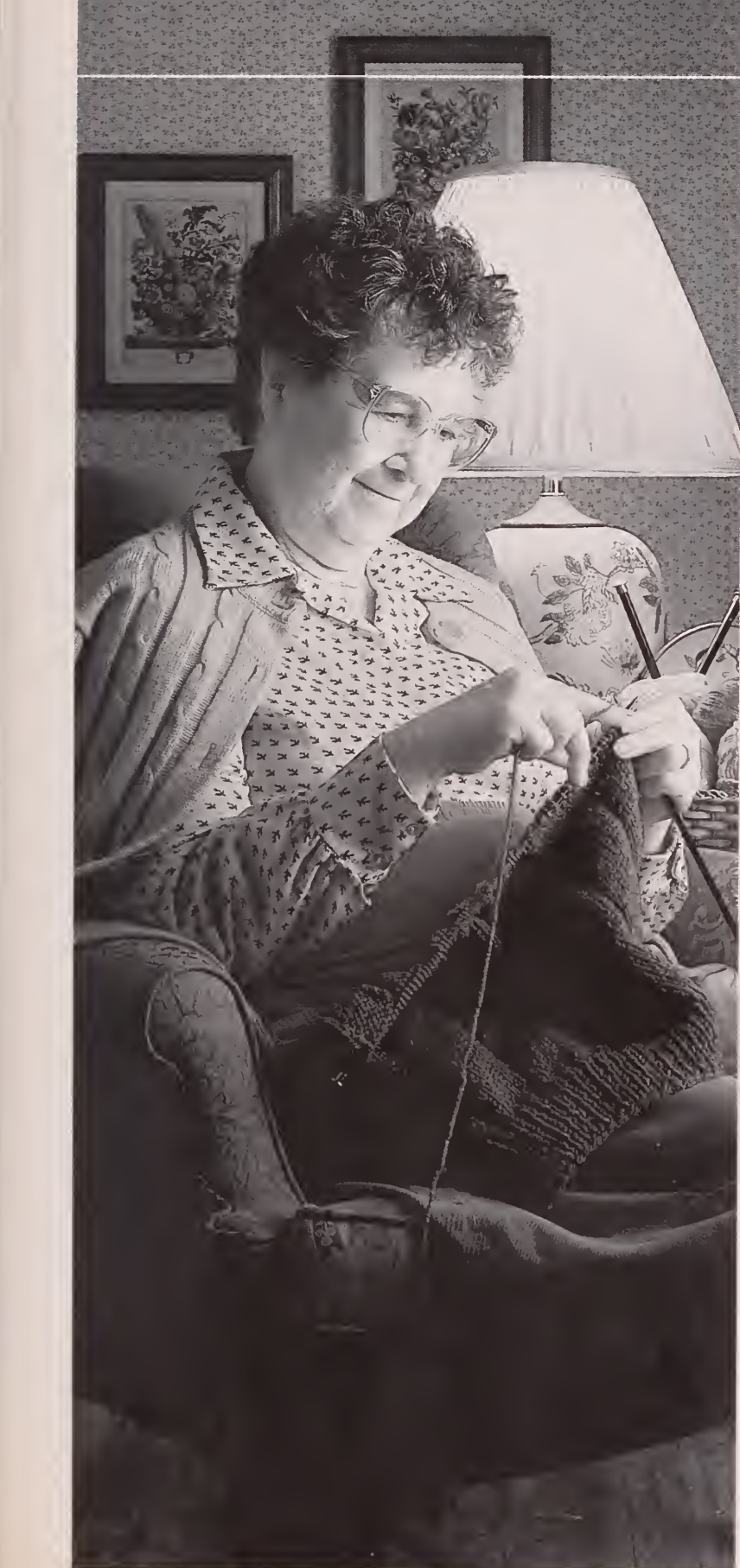
**The allowed charges for the practitioner services of  
PAs, NPs, and CNSs are based on the percentage of the  
physician fee schedule amount listed below:**

	<b>PAs</b>	<b>NPs (nonrural)</b>	<b>Rural NPs &amp; CNSs</b>
<b>Assistant at Surgery</b>			
Hospital	65%	NA (NP's site limited to nursing facilities)	75%
Nonhospital	65%	NA (NP's site limited to nursing facilities)	85%
<b>Nonassistant at Surgery</b>			
Hospital	75%	NA (NP's site limited to nursing facilities)	75%
Nonhospital			
SNF-NF	85%	85%	85%
Other	85%	N/A	85%
	Rural HPSA only		

- For nurse midwives, the Medicare allowed charge is based on 65% of the physician fee schedule amount.
- For CRNAs, a separate fee schedule has been established.
- Unlike physicians, each of these practitioners must accept Medicare assignment when they render any of their practitioner services.
- Diagnostic tests provided by nonphysician practitioners or suppliers are not subject to the percentage payment reductions nor to the mandatory assignment provisions which are applicable to the practitioner services of these nonphysicians. Such diagnostic test will be paid based on the full fee schedule amount and they are not subject to mandatory assignment. □

**Please retain this information for your files. It will be routinely distributed again only if revisions have been made in the document. You may, of course, obtain additional copies from your carrier.**



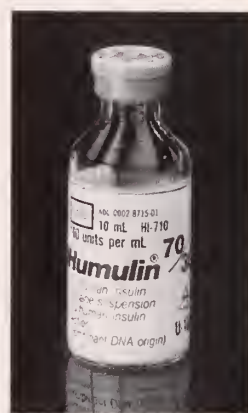


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## The President's Page

JAMES C. WAITES, MD

### Life Is For Sharing

I suppose that one of the most difficult jobs that the president of the MSMA has is to put thoughts on paper to share with you each month. It is not that there is not a lot to share, but how to limit your thoughts and then get them on paper. This month I would like to get somewhat philosophical and share a Christmas wish with you.

As I write this, I have just shared a day with my grandchildren as they were riding in a horse show. But not only with my grandchildren, but with their mother (my daughter) and her husband, my wife Jo and my mother-in-law. The reason for mentioning this is the purpose of this article. Life is for sharing. We had a great time just being together, encouraging the kids, and visiting. Not very productive, but in all a great day, one that shall be remembered. When we returned home, I happened to see the end of the movie *Out of Africa* and heard the beautiful eulogy of "Dennis." As those of you who saw the movie will recall, she mentioned being thankful for having "shared in his life." This thought got me in a very reflective mood and set the tone for writing this. I am sure that each of us has a philosophy of life either spoken or unspoken that we live by. If you have not reflected on yours lately, let me share some thoughts with you.

Life is a gift. It is a miracle that each of us is what and who we are. We are each unique, given to each other to share that uniqueness, and what we share helps to shape what we are and for what we stand. External circumstances are often beyond our control, but our reactions to those circumstances are our own and are controlled by us. It is up to us to make something good of our lives and to share that with others in shaping their lives.

Dr. R. Maurice Boyd, the pastor of Fifth Avenue Presbyterian Church in New York, has written a book entitled *A Lovers Quarrel with the World*, which is a collection of some of his sermons. The book was given to me by a friend whom I treasure, and who has shared her life with me. I was fascinated by his sermon "Punctuate Your Life." He contends, and I agree, that "punctuation is not just a matter of writing, or of speaking. It is a matter of living." Let me share some of his thoughts with some of mine added and see if you agree. I think, as he states, that you can think of more to add, and some different uses of your own, but you will see that the "well-punctuated life is a life that is more coherent, more meaningful and more readily understood than one that isn't."

First the well-punctuated life should have question marks in it. This would indicate a sense of wonder, to acknowledge that we do not know everything, that there are still worlds to explore, conquests to be made, and new opportunities to be had. Without this sense of wonder what would be discovered? After all true art and science begin with the premise of "I wonder." Question marks remind us that our

*(Continued on page 458)*



## HIV Testing

The special article in this issue on the CDC recommended guidelines for HIV testing is quite timely, given the recent disclosure by professional basketball star Ervin Johnson that he is HIV positive. The fact that he apparently acquired the virus through heterosexual contact brings into focus the fact that this disease is not confined to one or two segments of society. On the contrary, the reservoir of infected individuals is rapidly expanding to include all elements of society. This should not be surprising, given the epidemiology of other sexually transmitted diseases.

In view of the emotional aspects of this illness, what is the best approach for the medical community to take as far as prevention, diagnosis, and management are concerned? As physicians, it appears that our task, as with other infirmities, is not to pass moral judgement on our patients, however they might acquire this illness, but to help them as much as medical science allows, within the guidelines of the Hippocratic oath. The care that we render, including the utilization of HIV testing, should be based on objective scientific data, not emotions. The proposed mandatory HIV testing of "high risk groups" presents a Pandora's box which should be opened based only on objective scientific data proving the validity of such an approach, and taking into account the rights of individuals as well as the rights of society. The importance of the proper approach to this problem cannot be overstated because, in all likelihood, the precedents set now will be applied in the future to diseases which do not presently exist and under circumstances which we cannot now imagine.

George E. Abraham, MD  
Associate Editor

## It's Time To Get Real About Health Care

Any thinking physician must realize that health care costs are ridiculously high and something must be done to contain them. Canada and England are examples of total health care at a much smaller percentage of the G.N.P. Their's is accomplished by limiting access. Here we have some 35 million who have no health insurance and untold others who have private insurance. What is wrong with our system?

In the first place our government is inefficient and excessively wasteful in every thing it undertakes; secondly, the litigious atmosphere is such that excessive use of laboratory, imaging and x-rays are utilized as a hedge against malpractice suits; thirdly, the cost of liability insurance continues to be excessive and doctors spend more time in court to defend themselves; fourthly, we are spending a disproportionate amount of funds to keep the terminally ill alive beyond any quality of life; lastly, there is nothing in our system to encourage economy.

It is time we began discussing euthanasia; limiting organ transplants, coronary surgery, and even dialysis. Not all patients died of coronary occlusion before bypass surgery and with a change in life style and proper medication many led comfortable lives for years thereafter. We are spending enormous sums on dialysis in the very elderly. Little wonder the suicide rate is so high in this group. Another factor to consider is the extreme expense of keeping very tiny prematures alive. It is yet too early to see what burdens they may be on society in years to come. Another mushrooming expense is home health care. While it has some merit it is becoming abused and doctors are losing contact with the patient.

The editorial opinions expressed in this Journal are those of the indicated author. Editorial opinions are not expressions of the views, or official policies of The Mississippi State Medical Association. We encourage the membership to submit letters for publication regarding any opinion expressed or information contained in the Journal.



## **Guest Editorial/continued**

Admittedly, these are all moot questions but it is time we faced facts. With the ever expanding technology and the longevity of our people, who knows what will be expected in the future.

We can liken this to triage, that is, put the resources we have where they will do the most good for the majority.

Our legal problems could probably be alleviated at the state level if we stopped sending lawyers to the legislature.

**W. Moncure Dabney, MD**  
**Editor Emeritus**

## **Presidents's Page**

*(Continued from page 456)*

knowledge, however full, is still incomplete. The more we know and understand, the more there is to be discovered and learned. I agree with the preacher, "Knowledge increases the sense of mystery; that the more you know, the more you know that you don't know." Question marks give us a sense of wonder at the birth of a child, reverence for that life that we vow to help and heal, and humility that often we are just fellow travelers on the journey that we call life and can do nothing but offer comfort and some of ourselves to those we call patient. Life has a way of humbling us when we grow conceited and think that we know so much. Like Dr. Boyd, I am indebted to Harry Truman for reminding us that, "It is what you learn after you know it all that really counts."

Next, the well-punctuated life should have "quotation marks" to acknowledge our indebtedness to others. Quotation marks not only declare our indebtedness, they are the mark of a well-furnished mind. If you were confined in solitary what would you mind dwell on to keep sanity. It was Margaret Prescott Montague, an American novelist and short-story writer, who was blind from birth and later learned that she was growing progressively deaf who said, "If the world be shut without, I'll sail the hidden seas within." Are your "hidden seas" great oceans of the world, teaming with life, or are they duck ponds, muddy and shallow and narrow. We should fill our lives and those of our children with question marks, and quotation marks so that we are like the man in Edgar Frank's poem "Goshen." A friend asked him how he could

live in the wretched town of Goshen where the people did little more than gossip and plant cabbages. He replied that he did not live in Goshen. He ate there, slept there, and worked there. But he lived in Greece with Plato, and dwelt in Italy with Dante. He lived in his Paradise, not Goshen.

Next our lives should be filled with "exclamation marks." For our enthusiasm! How are we seen? Chronically tired, cynical, upset over RBRVS, apathetic? Life tends to "steal" our enthusiasm. Has that happened to you? It has been said that, "Eugene Ormandy dislocated his shoulder while conducting the Philadelphia orchestra." Some of us do not have enthusiasm enough to dislocate our necktie let alone our shoulder. We feel a sense of duty to our profession, but we "lack the charm, graciousness, and joy of a great enthusiasm." We discourage our young people about our profession, but it is still one of the most noble, honorable, and well paid in the world. We need to rekindle our enthusiasm, our "exclamation marks," if you will.

Another piece of punctuation what we need to add to our lives is the apostrophe. In other words we need to know how to deal wisely with our possessions. Perhaps more than any other this one made me want to share these thoughts with you. Some people talk about "my time, my money, my talents." When we talk this way, then we tend to live that way. We become narrow and selfish and our possessions begin to possess us. This is the opposite of the "shared life." It was C.S. Lewis who said, "Nothing that you have not given away will ever be really yours." And Ernest Hemingway said, "If I can't give something away, I do not really own it, it owns me."

Have you grasped the concept that being is more important than having? That what we are is more important than anything that we possess? That the only thing that we can really give that is lasting is ourselves, our love, the sharing of ourselves with each other? It was the one whose birthday that we will celebrate shortly that said "He who would be greatest among you must become the least," and "For whoever wants to save his life will lose it, but whoever loses his life for me will save it." To truly possess life we must give it away, share it, with others.

Merry Christmas to all of you for the Waites, Jim and Jo. We wish you a prosperous New Year and look forward to sharing today and tomorrow with you. □





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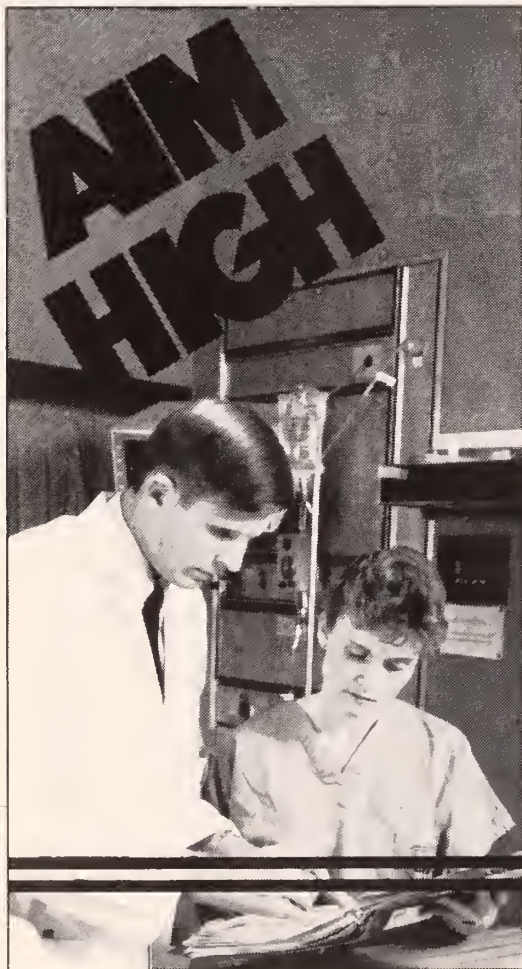
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# "Current Opinions" of the Council on Ethical and Judicial Affairs of the American Medical Association

## OPINIONS ON PRACTICE MATTERS

### Contractual Relationships

The contractual relationships that physicians assume when they enter prepaid group practice plans are varied.

Income arrangements may include hourly wages for physicians working part time, annual salaries for those working full time, and share of group income for physicians who are partners in groups that are somewhat autonomous and contract with plans to provide the required medical care. Arrangements also usually include a range of fringe benefits, such as paid vacations, insurance and pension plans.

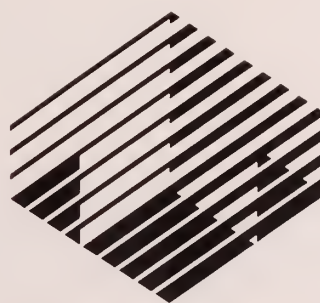
Physicians may work directly for plans or may be employed by the medical group or the hospital that has contracted with the plan to provide services. The AMA recognizes that under proper legal authority such plans may be established and that a physician may be employed by, or otherwise serve, a medical care plan. In the operation of such plans, physicians should not be subjected to lay interference in professional medical matters and their primary responsibility should be to the patients they serve.

### Drugs and Devices: Prescribing

1. A physician should not be influenced in the prescribing of drugs, devices or appliances by a direct or indirect financial interest in a pharmaceutical firm or other supplier. Whether the firm is a manufacturer, distributor wholesaler or repackager of the products involved is immaterial.
2. A physician may own or operate a pharmacy or dispense drugs if there is no resulting exploitation of patients.
3. A physician should not give patients prescriptions in code or enter into agreements with pharmacies or other suppliers regarding the filling of prescriptions by code.
4. Patients are entitled to the same freedom of choice in selecting who will fill their prescription needs as they are in the choice of a physician. The prescription is a written direction for a therapeutic or corrective agent. A patient is entitled to a copy of the

physician's prescription for drugs, eyeglasses, contact lenses, or other devices as required by the Principles of Medical Ethics and as required by law. The patient has the right to have the prescription filled wherever the patient wishes.

5. Patients have an ethically and legally recognized right to prompt access to the information contained in their individual medical records. The prescription is an essential part of the patient's medical record. Physicians should not discourage patients from requesting a written prescription or urge them to fill prescriptions from an establishment which has a direct telephone line or which has entered into a business or other preferential arrangement with the physician with respect to the filling of the physician's prescriptions.



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# Medical Organization

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## Vicksburg Physicians and MSDH Join Forces on HIV/AIDS Clinic

Vicksburg family physician Dr. Lee Giffin has spearheaded efforts among a group of local physicians to organize a community-based clinic for HIV/AIDS patients.

Giffin said he chose to volunteer for this clinic because, "I perceive it (HIV/AIDS) as a growing problem that will involve all the community eventually. The sooner we can get a system going, the sooner we will be able to serve the community."

The clinic will cover all aspects of HIV/AIDS including identification and treatment. Physicians plan to custom design treatment based on client needs. Clinic organizers hope this unique care and outreach system will become a model for rural areas with similar needs throughout the nation.

The project began more than a year ago with \$10,000 in seed money from the Warren County Board of Supervisors. Salena Greenlee, Warren County Health Department coordinating nurse, requested the money to treat HIV/AIDS patients in the area.

The project got a boost in September when the city of Vicksburg announced receipt of a three-year, \$400,000 federal grant to operate the clinic in the Warren County Health Department, tentatively scheduled to begin January 1992.

But there's much more to this story than money. Community support from the county, the city, the health department, and private physicians has made this a real team effort.

The City of Vicksburg's application was one of 523 submitted nationwide under the Rural Health Outreach Program. The Health Resources and Services Administration program funded only 100 projects.

MSDH West Central Public Health District V Health Officer Dr. Don Grillo commended private practitioners who've signed on to help with the project. Dr. Lee Giffin and 10 other local physicians plan to contribute their time and talents to treat HIV/AIDS patients at the clinic. Each will donate up to eight hours every month to care for HIV/AIDS patients.

Giffin said area physicians were looking for ways to address the HIV/AIDS issue in the community when Dr. Grillo approached the West Mississippi Medical Society. Grillo was looking for assistance with HIV/AIDS patients in the area needing physician referral.

"After we got a list of physicians interested in seeing these patients, the idea developed to set up a clinic for the special care persons with AIDS need," Giffin said. "We recognized a real problem in adequate follow-up and set out to meet that need."

Giffin said existing support services and facilities at the Warren County Health Department made it an ideal location for the clinic. Those resources include nurses, social workers, disease intervention specialists, and association with the statewide Department of Health HIV/AIDS Prevention Program.

"This grant seems like a lot of money, but much of that is dedicated to start-up costs and compliance with Federal regulations," Giffin said. "Most of these patients are hard-pressed financially, and this will help pay for many of the services they need."

Giffin said the physicians involved will follow standard protocol for treating HIV/AIDS patients. When referral for more involved care is necessary, the group plans to use the resources at the University of Mississippi Medical Center in Jackson.

"We're still in the planning stages with that," Giffin said, "but the commitment from the UMC to this point has been good. We're also trying to arrange an in-service session for everyone who will be working at the clinic -- doctors, nurses, and everybody -- to get us up to speed on all the latest procedures."

Volunteering physicians include family practitioners, internists, and possibly a pediatrician and a dermatologist. Giffin's personal involvement has centered around recruiting these physicians and "cheer-leading" the project.

"Many physicians have volunteered their time to help the community," Giffin said. "This is just what our community has chosen to address. It's been a major community effort, and with major health issues you like to see that."

HIV and AIDS is becoming increasingly important health issue in the state. As of November 5, some 812 Mississippians had been diagnosed with AIDS since the first case was recorded in 1981; 476 had died. West Central Public Health District V -- a 10-county area including Vicksburg and Jackson -- has the highest number of AIDS cases in the state with 292 or 36 percent.



Giffin said he and the other physicians "don't want to make a big deal of what we're doing. The recognition is good, but that's not the reason. We don't want to isolate these patients, and this is a good way to get started providing the care they need." □

## "Sharing the Challenge" National AIDS Awareness Day

Almost 500 Mississippians have lost their lives to a disease many people consider someone else's problem: AIDS.

Public health officials worldwide want people to focus their attention on the fact that HIV/AIDS is everyone's problem, not just "the other guy."

To meet that goal, the sponsoring group -- the World Health Organization -- chose the theme "Sharing the Challenge" for the fourth annual observance of World AIDS Day December 1, 1991. National AIDS Awareness day is December 2, 1991.

Dr. Hiroshi Nakajima, director-general, WHO, said "We all need to join forces and share the challenge. We need to commit time, resources, and efforts in a way that draws on the strengths of each of us for maximum collective impact. Only partnership gives us a chance of prevailing against the AIDS pandemic."

The AIDS pandemic has left no continent untouched. As of mid-1991, WHO estimates that eight to 10 million men, women, and children worldwide have been infected with HIV and that over 1.5 million of them have done so on the develop AIDS.

As of October 31, some 199,406 people in the U.S. had been diagnosed with AIDS; of these, 126,289 had died. Of the 812 Mississippians diagnosed through November 5 with AIDS, 476 had died.

World AIDS Day 1991 and National AIDS Awareness Day will continue to focus on facts about HIV/AIDS and reinforce AIDS prevention activities at all levels. Observances can strengthen the worldwide effort to meet the challenge of AIDS by showing how the challenge can be shared. In addition, World AIDS Day will promote support and care for HIV-infected persons and people with AIDS, their families and friends, and help combat discrimination and isolation.

The ultimate goal is to have as many people as possible in the United States and around the world communicating about AIDS to heighten awareness of AIDS as a global challenge and to create the solidarity

essential to the worldwide effort against AIDS.

For more information about HIV/AIDS readers may contact the Mississippi State Department of Health AIDS Prevention Program, 960-7723; the Mississippi AIDS Information Line, 1-800-826-2961; the National AIDS Hotline, 1-800-342-AIDS; or write the American Association for World Health, 1221 L. Street, NW, Washington, DC 20036. □

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## New Members

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**Bateman, Kyle S., Collins.** Born Japan, July 12, 1958; MD University of Mississippi School of Medicine, Jackson, MS 1984; interned and family practice residency, Naval Hospital, Pensacola, FL 1984-89; elected by South MS Medical Society.

**Causey, Jack Q., II,** Hattiesburg. Born New Orleans, LA, November 24, 1959; MD University of Mississippi School of Medicine, Jackson, MS 1985; interned and pathology residency University of Tennessee, Memphis, TN, 1986-91; elected by South MS Medical Society.

**Clark, Jacquelyn L.,** Jackson. Born Starkville, MS, August 30, 1960; MD University of Mississippi School of Medicine, Jackson, MS 1987; interned Chicago Medical School, Chicago, IL, one year; family practice residency Lutheran General Hospital, Park Ridge, IL, one year; family practice residency, University Medical Center, Jackson, MS, 1989-91; elected by Central Medical Society.

**Fabrega, Ruben D.,** Yazoo City. Born Panama City, Panama, December 17, 1952; MD University of Panama City, Panama 1975; interned and internal medicine residency, Same, 1975-80; medical oncology fellowship, M. D. Anderson Hospital, Houston, TX, 1980-81; medical oncology fellowship, Sloan Kettering, NY, 1981-82; elected by Delta Medical Society.

**Hensely, Michael F.,** Biloxi. Born Dallas, TX, March 13, 1940; DO University Health Sciences, College of Osteopathic Medicine, Kansas City, Missouri, 1971; interned Wright Patterson AFB, Fairborn, OH, one year; pediatric residency, Childrens Mercy Hospital, Kansas City, MO, 1972-74; pediatric hematology & oncology fellowship M. D. Anderson Hospital, Houston, TX 1975-77; elected by Coast Counties Medical Society.

**Jones, Phillip E.,** Tupelo. Born Amory, MS, December 7, 1961; MD University of Mississippi School of Medicine, Jackson, MS, 1984; family practice residency Self Memorial Hospital, Greenwood, SC 1988-91; elected by Northeast MS Medical Society.

**Jones, R. B.,** Tupelo. Born Oxford, MS, May 24, 1957; MD University of Mississippi School of Medicine, Jackson, MS 1988; family practice residency, University of Alabama College Community Health Sciences, Tuscaloosa, AL 1988-91; elected by Northeast Miss Medial Society

**Logan, W. D., Jr,** Carthage. Born Ecu, MS, March 20, 1927; MD Emory University School of Medicine, Atlanta, GA, 1952; interned Grady Hospital, Atlanta, GA, 1956-57; surgery residency, Duke University, Durham, NC & Grady Memorial Hospital, Atlanta, GA, 1953-57; thoracic surgery residency one year, Guys hospital, London, England, 1957-58; thoracic surgery residency one year Emory University, Atlanta, GA, 1958-59; elected by Central Medical Society.

**Mehta, Maheshkumar P.,** Jackson. Born Nairobi, Kenya, March 31, 1950; MD, VM Medical College, Sholapur, India, 1974; interned one year St Josephs Hospital, Denver, CO; anesthesiology residency, University of Michigan, Ann Arbor, MI, 1976-78; elected by Central Medical Society.

**Pritchard, Doyle A.,** Tupelo. Born Memphis, TN, November 5, 1953; MD, University of South Alabama School of Medicine, Mobile, AL, 1979; interned one year Baptist Memorial Hospital, Memphis, TN; ENT residency, University of Tennessee, Memphis, TN, 1981-84; plastic surgery residency, Medical College of Georgia, Augusta, GA, 1984-86; elected by Northeast MS Medical Society.

**Sharpton, Hobert J., Jr,** Newton. Born Birmingham, AL, May 3, 1959; DO, Southeastern College of Osteopathic Medicine, Miami, FL, 1988; interned one year, University Medical Center, Plantation, FL 1988-89; family practice residency, same, 1988-91; elected by East MS Medical Society.

**Smith, Randall S.,** Jackson. Born San Diego, CA, May 6, 1949; MD Albert Einstein College of Medicine, New York, 1975; interned and pathology residency, University of California at Los Angeles, CA, 1975-80; elected by Central Medical Society.

**Starnes, Eddie C.,** Meridian. Born Johnson City, TN, March 15, 1946; MD University of Tennessee School of Medicine, Memphis, TN, 1971; interned Beaumont Army Medical Center, El Paso, TX, one year; internal medicine and fellowship in gastroenterology, Same, 1973-77; elected by East MS Medical Society.

**Vick, Edward G., Sr.,** Jackson. Born Water Valley, MS, April 24, 1940; MD University of Tennessee College of Medicine, Memphis, TN, 1974; interned one year, Methodist Hospital, Memphis, TN; otolaryngology residency & facial plastic and reconstructive surgery fellowship, University of Tennessee, Memphis, TN; elected by Central Medical Society. □





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# Deaths

**Howard, Anse B., III**, Leakesville. Born Laurel, MS, December 18, 1942; MD University of Mississippi School of Medicine, Jackson, MS, 1967; interned one year MS Baptist Hospital, Jackson, MS; died August 16, 1991, age 49.

**Lynch, Marshal B.**, Marks. Born Oxford, MS, December 27, 1913; MD University of Tennessee College of Medicine, Memphis, TN, 1941; interned one year Baptist Memorial Hospital, Memphis, TN; died November 2, 1991, age 77.

**Watkins, John W.**, Quitman. Born Quitman, MS August 25, 1916; MD Emory University School of Medicine, Atlanta, GA, 1941; interned one year Erlanger Hospital, Chattanooga, TN; died October 5, 1991; age 75. □

## Personals

*(continued from 473)*

**William R. Smith** has associated with Central Nephrology Clinic, P.A., 381 Medical Drive, Jackson, MS, for the practice of nephrology.

**G. Kermit Till** announces the relocation of his Practice for Family Medicine to Crossgates Medical Plaza, 348 Crossgates Boulevard, Suite 1200, Brandon, MS.

**Grayden A. Tubbs** of Fulton recently attended the Annual Scientific Assembly of Family Physicians in Washington, D. C.

**B.L. Walker** of Jackson has received his certification becoming the only board certified, Dermatopathologist in Mississippi. This certification is granted jointly by The American Board of Pathology and The American Board of Dermatology.

**W. W. Walley** of Waynesboro is the new president of the Mississippi Baptist Convention.

**Bill Walton** a Charleston, MS native, has joined the Tupelo Family Medical Center.

**William Martin Wood** of Meridian has joined the medical staff of Laurel Wood Center. □

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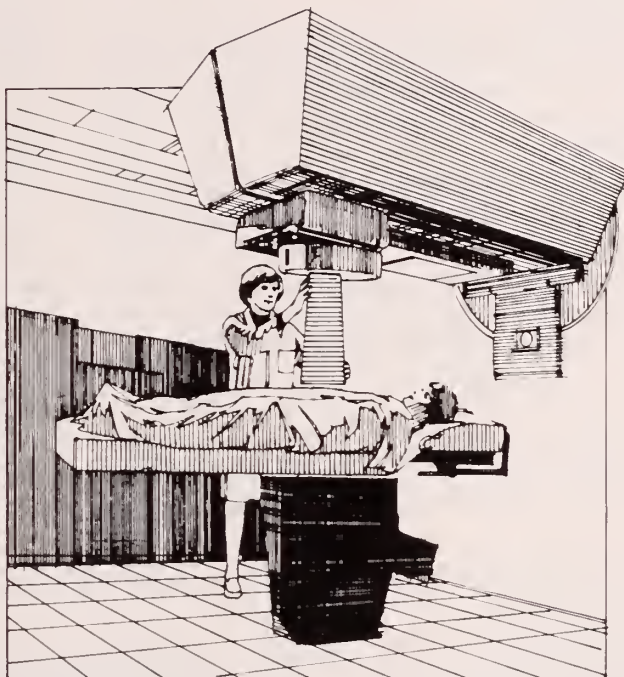
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## Personals

**Thomas J. Anderson** of Laurel has been recertified as a diplomate of the American Board of Family Practice.

**A.P. Boggan** of Decatur was honored in special recognition by East Central Community College for providing medical services for their athletes for over 35 years.

**Donald Booth** has been named chief of staff at Ocean Springs Hospital, Ocean Springs.

**Leonard H. Brandon** of Starkville has been recertified as a diplomate of the American Board of Family Practice.

**George R. Bush** of Laurel has been recertified as a diplomate of the American Board of Family Practice.

**Richard C. Carter, Jr** of Kosciusko, has been recertified as a diplomate of the American Board of Family Practice.

**Harry E. Dayton** has associated with Rush Medical Group, PA, Meridian for the practice of cardiology.

**Daniel Edney** of Vicksburg spoke to the Warren County Diabetic Support Group on the topic *Foot Problems and Diabetes*.

**Ruben D. Fabrega** announces the opening of his office for internal medicine, medical oncology and family practice at 522 Grand Avenue, Yazoo City. He is Board Certified in both internal medicine and medical oncology.

**William R. Fellows** has associated with the Family Medical Center of Pass Road, 612 E. Pass Road, Gulfport,

in the practice of internal and addiction medicine.

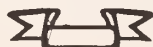
**J. Edward Hill** of Hollandale attended the Annual Scientific Assembly of the American Academy of Family Physicians recently in Washington, D.C.

**Ken Jones** of Jackson announces the relocation of the Nassar and Jones Eye Clinic, P.A. to Lakeland Medical Center, Suite 200, for the practice of Ophthalmology, Diseases and Surgery of the Eye.

**John William Lewis, Jr.** of Rosedale has been recertified as a diplomate of the American Board of Family Practice.

**John L. McCloskey** has been named chief of staff at Singing River Hospital, Pascagoula.

## Physicians' Recognition Award



Seven MSMA members were named recipients of the AMA Physicians' Recognition Award in October 1991. This award is presented by the American Medical Association to Physicians who have voluntarily completed a specified number of continuing medical education hours. These seven individuals are presented below by medical society.

### CENTRAL

**George Ball, MD**  
**Kenneth Gilbert Carter, MD**  
**George C. Hamilton, MD**

### NORTHEAST MISSISSIPPI

**Albert Victor Horn, MD**  
**Hugh Carlton Moore, MD**

### EAST MISSISSIPPI

**Robert Elliott, MD**

### WEST MISSISSIPPI

**Gene Warren, MD**



**Barry McCraw** and **Champa Nagappa** of Starkville announce the opening of the Children's Clinic, Pediatric and Adolescent Medicine, 720 Medical Center Drive, West Point, MS.

**Wesley McFarland** of Bay St. Louis was honored recently by Gulfport Memorial Hospital, becoming an Honorary member of the Medical Staff. In his retirement, Dr. McFarland has decided to practice Cruise Ship Medicine.

**Brent Meador** is the new medical director at Mississippi Baptist Chemical Dependency Center, a department of Mississippi Baptist Medical Center.

**James R. Medlin** of Tupelo announces the opening of North Mississippi Diagnostic and Treatment Center, 120 South Thomas Street, Tupelo.

**Major General Wafford H. Merrell, Jr.** of Jackson was recently honored in retirement ceremonies by the 213th Medical Brigade for his 30 years of service in the Mississippi National Guard.

**H. Thomas Milhorn, Jr.**, of Jackson has been named associate director of chemical dependency for the Laurel Wood Center.

**Francis S. Morrison** of Jackson recently returned from an extensive tour of European blood centers and transfusion services as a visiting professor. He was invited consultant to the programs in Groningen, Luxembourg, Paris, Dijon, Florence and Munich. Dr. Morrison also attended the annual meeting of the American Association of Blood Banks in Baltimore, Maryland, where he was named to the Extracorporeal Therapy Committee. This committee is evolving guide-

lines and standards for hemapheresis procedures in the U. S.

**Luis Felipe Mosquera**, general surgeon - surgical oncologist, has been initiated as a Fellow of the American College of Surgeons.

**Charles Ozborn** of Eupora has been recertified as a diplomate of the American Board of Family Practice.

**Prentiss Morris Parsons** of Ackerman has been recertified as a diplomate of the American Board of Family Practice.

**Fredrick C. Shaw** announces the opening of the Pediatric and Adolescent Center, Specializing in pediatric and adolescent medicine, 221 S. Main Street, Yazoo City, MS.

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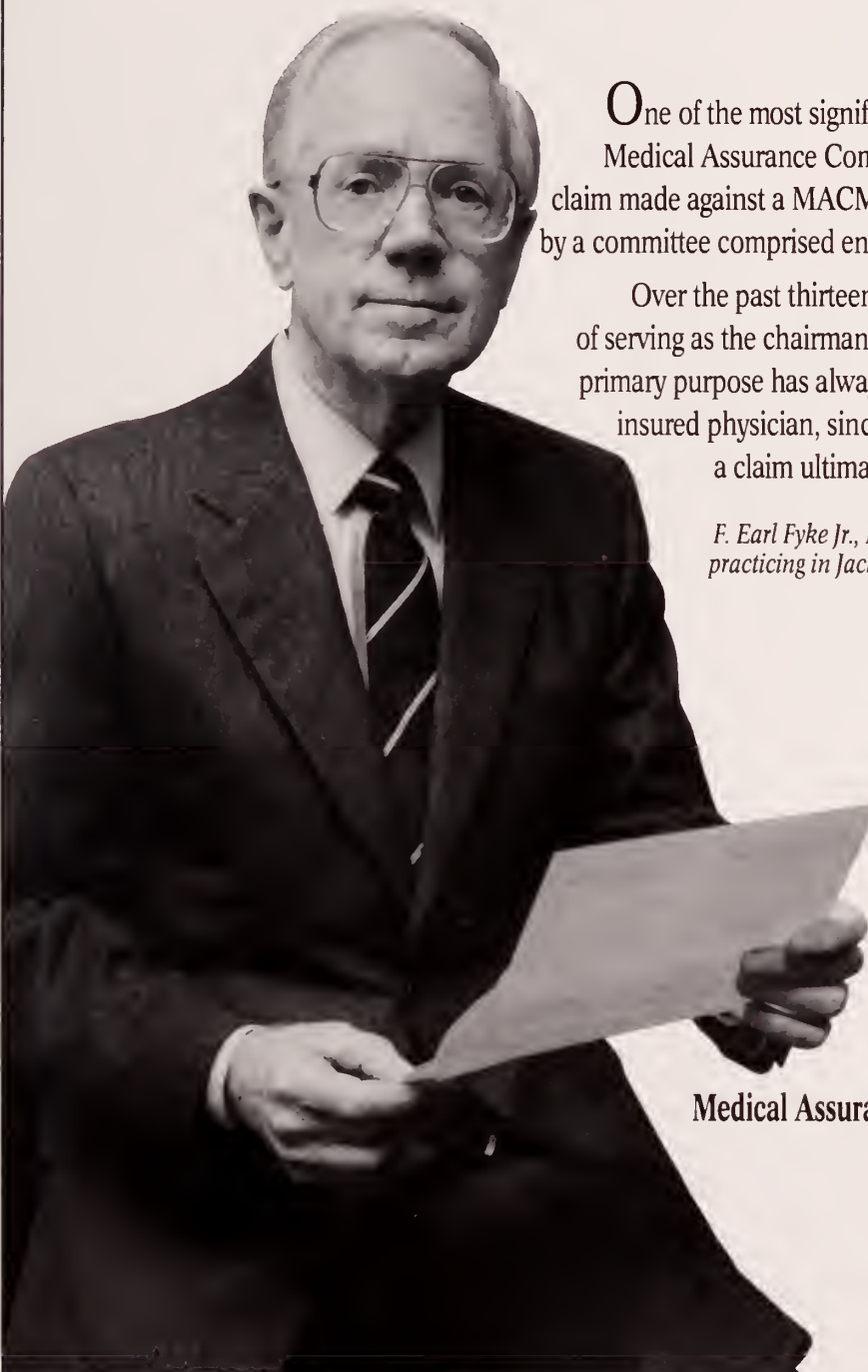
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*F. Earl Fyke Jr., M.D., is a Board Certified Internist practicing in Jackson.*



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The recommended starting dose for Calan SR is 180 mg once daily. Dose titration will be required in some patients to achieve blood pressure control.

A lower initial starting dosage of 120 mg/day may be warranted in some patients (eg, the elderly, patients of small stature).

Constipation, which is easily managed in most patients, is the most commonly reported side effect of Calan SR.

#### BRIEF SUMMARY

**Contraindications:** Severe LV dysfunction (see *Warnings*), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no pacemaker is present), 2nd- or 3rd-degree AV block (if no pacemaker is present), atrial flutter/fibrillation with an accessory bypass tract (eg, WPW or LGL syndromes), hypersensitivity to verapamil.

**Warnings:** Verapamil should be avoided in patients with severe LV dysfunction (eg, ejection fraction < 30%) or moderate to severe symptoms of cardiac failure and in patients with any degree of ventricular dysfunction if they are receiving a beta-blocker. Control milder heart failure with optimum digitalization and/or diuretics before Calan SR is used. Verapamil may occasionally produce hypotension. Elevations of liver enzymes have been reported. Several cases have been demonstrated to be produced by verapamil. Periodic monitoring of liver function in patients on verapamil is prudent. Some patients with paroxysmal and/or chronic atrial flutter/fibrillation and an accessory AV pathway (eg, WPW or LGL syndromes) have developed an increased antegrade conduction across the accessory pathway bypassing the AV node, producing a very rapid ventricular response or ventricular fibrillation after receiving I.V. verapamil (or digitalis). Because of this risk, oral verapamil is contraindicated in such patients. AV block may occur (2nd- and 3rd-degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with verapamil.

**Precautions:** Verapamil should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Verapamil may decrease neuromuscular transmission in patients with Duchenne's muscular dystrophy and may prolong recovery from the neuromuscular blocking agent vecuronium. It may be necessary to decrease verapamil dosage in patients with attenuated neuromuscular transmission. Combined therapy with beta-adrenergic blockers and verapamil may result in additive negative effects on heart rate, atrioventricular conduction and/or cardiac contractility; there have been reports of excessive bradycardia and AV block, including complete heart block. The risks of such combined therapy may outweigh the benefits. The combination should be used only with caution and close monitoring. Decreased metoprolol and propranolol clearance may occur when either drug is administered concomitantly with verapamil. A variable effect has been seen with combined use of atenolol. Chronic verapamil treatment can increase serum digoxin levels by 50% to 75% during the first week of therapy, which can result in digitalis toxicity. In patients with hepatic cirrhosis, verapamil may reduce total body clearance and extrarenal clearance of digoxin. The digoxin dose should be reduced when verapamil is given, and the patient carefully monitored. Verapamil will usually have an additive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after verapamil administration. Concomitant use of flecainide and verapamil may have additive effects on myocardial contractility, AV conduction, and repolarization. Combined verapamil and quinidine therapy in patients with hypertrophic cardiomyopathy should be avoided, since significant hypotension may result. Concomitant use of lithium and verapamil may result in a lowering of serum lithium levels or increased sensitivity to lithium. Patients receiving both drugs must be monitored carefully. Verapamil may increase carbamazepine concentrations during combined use. Rifampin may reduce verapamil bioavailability. Phenobarbital may increase verapamil clearance. Verapamil may increase serum levels of cyclosporin. Verapamil may inhibit the clearance and increase the plasma levels of theophylline. Concomitant use of inhalation anesthetics and calcium antagonists needs careful titration to avoid excessive cardiovascular depression. Verapamil may potentiate the activity of neuromuscular blocking agents (curare-like and depolarizing); dosage reduction may be required. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. Verapamil is excreted in breast milk; therefore, nursing should be discontinued during verapamil use.

**Adverse Reactions:** Constipation (7.3%), dizziness (3.3%), nausea (2.7%), hypotension (2.5%), headache (2.2%), edema (1.9%), CHF, pulmonary edema (1.8%), fatigue (1.7%), dyspnea (1.4%), bradycardia: HR < 50/min (1.4%), AV block: total 1°, 2°, 3° (1.2%), 2° and 3° (0.8%), rash (1.2%), flushing (0.6%), elevated liver enzymes, reversible non-obstructive paralytic ileus. The following reactions, reported in 1.0% or less of patients, occurred under conditions where a causal relationship is uncertain: angina pectoris, atrioventricular dissociation, chest pain, claudication, myocardial infarction, palpitations, purpura (vasculitis), syncope, diarrhea, dry mouth, gastrointestinal distress, gingival hyperplasia, ecchymosis or bruising, cerebrovascular accident, confusion, equilibrium disorders, insomnia, muscle cramps, paresthesia, psychotic symptoms, shakiness, somnolence, arthralgia and rash, exanthema, hair loss, hyperkeratosis, macules, sweating, urticaria, Stevens-Johnson syndrome, erythema multiforme, blurred vision, gynecostasia, galactorrhea/hyperprolactinemia, increased urination, spotty menstruation, impotence.

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